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The Faculty of
ARTS

1953-4

Queen's University
Library

KINGSTON, ONTARIO

QUEEN'S UNIVERSITY
CALENDAR OF THE FACULTY OF ARTS

QUEEN'S UNIVERSITY

CALENDAR

OF THE FACULTY OF

ARTS

1953-4

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NOTICE

THE CALENDAR OF THE FACULTY OF ARTS *is published some months before the opening of the session. Staff, courses, and regulations will probably be as announced, but the University reserves the right to make changes.*

CONTENTS

INTRODUCTION

<i>The Academic Year</i>	page viii
<i>Calendar 1953-4</i>	x
<i>Time-table of Lectures</i>	xii
<i>Time-table of Laboratory Work</i>	xiii
<i>History of the University</i>	xiv
<i>Government and Administration</i>	xvi

THE ADMINISTRATION

<i>The University</i>	3
<i>The Board of Trustees</i>	5
<i>The University Council</i>	6
<i>The Senate</i>	7
<i>The Library</i>	8

THE FACULTY

<i>Emeritus Professors</i>	9
<i>Instructors in the Faculty of Arts</i>	9
<i>Part-time Instructors, Teaching Fellows, and Assistants</i>	16
<i>Tutors</i>	16

EQUIPMENT AND SPECIAL FEATURES

<i>Library Service</i>	18
<i>The Museums</i>	20
<i>The Laboratories</i>	20
<i>Facilities for Field Work</i>	22
<i>Facilities for Athletics</i>	22
<i>The Music Room</i>	23
<i>The University Concert Series</i>	23

GENERAL INFORMATION

<i>Degrees</i>	24
<i>Council of Legal Education of Great Britain</i>	25
<i>The Students' Memorial Union</i>	25
<i>Co-operative Residences</i>	25
<i>Information for Women Students</i>	26

GENERAL INFORMATION (continued)

<i>Expenses</i>	page 27
<i>Physical Welfare of Students</i>	27
<i>Student Self-Government</i>	28
<i>Alma Mater Society Lecture</i>	29
<i>Fraternities</i>	29
<i>Military Services</i>	29
<i>Employment Service</i>	30
<i>Registration</i>	30

ADMISSION TO THE FACULTY OF ARTS

<i>Admission by Matriculation</i>	31
<i>Admission of Ex-servicemen and Women</i>	34
<i>Admission by Equivalent Examination</i>	34
<i>Admission to Advanced Standing</i>	35
<i>Admission by Special Regulation</i>	35

EXTRAMURAL INSTRUCTION

<i>Conditions of Admission</i>	36
<i>Fees</i>	38
<i>Residence Requirements</i>	39
<i>Conduct of Extramural Courses</i>	39
<i>Examinations</i>	40
<i>Extramural and Summer School Work</i>	42
<i>The Summer School</i>	43

FEES 45

SCHOLARSHIPS, PRIZES AND MEDALS

<i>Matriculation Scholarships</i>	48
<i>Scholarships in the Faculty of Arts</i>	48
<i>Graduate Fellowships</i>	65
<i>Prizes</i>	75
<i>Medals</i>	77

GENERAL REGULATIONS

<i>Regulations regarding Courses</i>	78
<i>Examinations</i>	79

COURSES OF STUDY

<i>Definitions</i>	82
<i>Synopsis of Courses</i>	82

COURSES OF STUDY (continued)

<i>General B.A.</i>	page 83
<i>Honours B.A.</i>	86
<i>Social Work</i>	88
<i>Combined Course in Arts and Physical and Health Education</i>	92
<i>Combined Course in Arts and Theology</i>	94
<i>Graduate Courses</i>	95

COURSES OF INSTRUCTION

<i>Art</i>	97
<i>Bacteriology</i>	97
<i>Biochemistry</i>	98
<i>Biology</i>	101
<i>Chemistry</i>	107
<i>Classics</i>	113
<i>Drama</i>	120
<i>English Language and Literature</i>	120
<i>French Language and Literature</i>	125
<i>Geological Sciences</i>	129
<i>German Language and Literature</i>	137
<i>Hebrew Language and Literature</i>	142
<i>History</i>	142
<i>Industrial Relations</i>	150
<i>Mathematics</i>	150
<i>Music</i>	155
<i>Philosophy</i>	156
<i>Physical Education</i>	160
<i>Physics</i>	161
<i>Physiology</i>	167
<i>Political and Economic Science</i>	168
<i>Psychology</i>	178
<i>Religion</i>	182
<i>Russian Language and Literature</i>	183
<i>Spanish Language and Literature</i>	183

INDEX	189
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The Academic Year *

THE HUNDRED AND THIRTEENTH SESSION of the University will begin on Thursday, 24 September 1953, at 8 a.m. Convocation will be held on Saturday, 15 May 1954 (this date is provisional).

1953

JUNE 15— Last day for receiving applications for fall supplementals without extra fee.

25—Last day for receiving applications for fall supplementals with extra fee.

JULY 2—Registration for Summer School. Registrations will not be accepted after 2 July unless special arrangements have been made before that date, and on these late registrations an additional fee of \$5 will be charged.

3—Summer School opens at 8 a.m.

10—Last day for receiving applications, from Summer School and extramural students, for August examinations and degrees, without extra fee.

20—Last day for receiving applications, from Summer School and extramural students, for August examinations and degrees, with extra fee.

AUGUST 14—Summer School closes.

18—Supplemental examinations for the Faculty of Arts begin.

SEPTEMBER 1—Last day for receiving applications for the Robert Bruce Bursaries and grants from the O. M. Montgomery Memorial Fund.

17—Last day for registrations of extramural students without extra fee.

21—Registration in Arts begins on 21 September for students who are registering for the first time. This group includes students transferring from other institutions. A late fee will be charged after this date (\$5 on 22 September and \$3 a day thereafter).

22—Registration of previously registered students in Honours Courses, in Physical and Health Education, and graduate students.

* The term "Academic Year" used in connection with regulations and Courses of Study refers to the period extending from 1 October to 30 September.

SEPTEMBER 23—Registration of previously registered students in Courses in General Arts and Commerce. A late fee will be charged after this date (\$5 on 24 September and \$3 a day thereafter).

24—Classes in Arts open at 8 a.m. Last day for registration of extramural students with an extra fee of \$5.

OCTOBER 3—Last day for registration of intramural students who have not previously obtained permission to register later.

10—Fall Convocation.

16—University Day.

DECEMBER 1—Last day for receiving applications and fees from extramural students for January examinations. *Beginning of the mid-year examinations to be announced.*

19—Christmas holidays begin at noon.

1954

JANUARY 4—Examinations in half-courses of the first term begin.

6—Classes in courses of the second term begin at 8 a.m. Last day for the payment of the second instalment of fees without penalty.

15—Last day for receiving applications from candidates for the M. C. Cameron Scholarship in Gaelic.

FEBRUARY 10—Last day for receiving applications and fees from extramural students for the April examinations and for degrees.

MARCH 1—Last day for receiving manuscripts for university prizes, applications for Research Fellowships, R. Samuel McLaughlin and Leonard Fellowships, and Khaki University and other Scholarships.

15—Last day for receiving applications and fees for degrees from intramural students.

APRIL 1—Classwork closes. Written notice due at the Registrar's Office of candidates' intention to compete for Provincial Scholarships and Ontario Matriculation Scholarships.

6—Examinations begin.

10—Last day for extramural students to register for the summer session without extra fee.

16—Good Friday.

17—Last day for extramural students to add classes for the summer session with extra fee.

MAY 15—Convocation for conferring degrees, announcing honours, and distributing prizes and medals. (This date is provisional.)

1954

January

<i>S</i>	<i>M</i>	<i>T</i>	<i>W</i>	<i>T</i>	<i>F</i>	<i>S</i>
				1	2	
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

February

<i>S</i>	<i>M</i>	<i>T</i>	<i>W</i>	<i>T</i>	<i>F</i>	<i>S</i>
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

March

<i>S</i>	<i>M</i>	<i>T</i>	<i>W</i>	<i>T</i>	<i>F</i>	<i>S</i>
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

April

<i>S</i>	<i>M</i>	<i>T</i>	<i>W</i>	<i>T</i>	<i>F</i>	<i>S</i>
		1	2	3		
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

May

<i>S</i>	<i>M</i>	<i>T</i>	<i>W</i>	<i>T</i>	<i>F</i>	<i>S</i>
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

June

<i>S</i>	<i>M</i>	<i>T</i>	<i>W</i>	<i>T</i>	<i>F</i>	<i>S</i>
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

July

<i>S</i>	<i>M</i>	<i>T</i>	<i>W</i>	<i>T</i>	<i>F</i>	<i>S</i>
		1	2	3		
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

August

<i>S</i>	<i>M</i>	<i>T</i>	<i>W</i>	<i>T</i>	<i>F</i>	<i>S</i>
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

September

<i>S</i>	<i>M</i>	<i>T</i>	<i>W</i>	<i>T</i>	<i>F</i>	<i>S</i>
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

October

<i>S</i>	<i>M</i>	<i>T</i>	<i>W</i>	<i>T</i>	<i>F</i>	<i>S</i>
		1	2			
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

November

<i>S</i>	<i>M</i>	<i>T</i>	<i>W</i>	<i>T</i>	<i>F</i>	<i>S</i>
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

December

<i>S</i>	<i>M</i>	<i>T</i>	<i>W</i>	<i>T</i>	<i>F</i>	<i>S</i>
		1	2	3	4	
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Monday, Wednesday, Friday

8 a.m.

9 a.m.

10 a.m.

11 a.m.

8 a.m.

9 a.m.

10 a.m.

11 a.m.

Tuesday, Thursday, Saturday

TIME TABLE of LECTURES

BIOLOGY 1 CHEMISTRY 13, m GEOLOGY 15A, f 18B, f MATHEMATICS 12A 15B	ASTRONOMY 1 BACTERIOLOGY 13 BIOCHEMIS. 20, wf BIOLOGY 19, mw COMMERCE 54 68 ECONOMICS 28B ENGLISH 7 FRENCH 11 GEOLOGY 11B, mw 13B, f 25A, f HISTORY 19, w MATHEMATICS 2 22 PHILOSOPHY 1 5 POLITICS 31 PSYCHOLOGY 4 SPANISH A 1	BACTERIO. 10, mw BIOLOGY 36, wf CHEMISTRY 2, wf 15A, wf 25, m COMMERCE 53 ECONOMICS 11 ENGLISH 1 2 (A) 5 FRENCH 2 14 GEOLOGY 10A, wf 12, wf 13B, m 21, w (T1) 26, mw (T2) GERMAN 2 HISTORY 5 12, wf 13	BIOCHEMISTRY 16 18 BIOLOGY 20 45 CHEMISTRY 12, wf 21B DRAMA COMMERCE 55 ECONOMICS 13 ENGLISH 3 22 FRENCH 10 21 25 GEOLOGY 2, mw 14, f 15A, w 18B, m 21, m 25A, m GREEK 1 HISTORY 3 27 MATHEMATICS 10A 11B PHILOSOPHY 7 23 PHYSICS 13B 14A 16A 20B POLITICS 37 PSYCHOLOGY 2 24 SOCIOLOGY 1	BIOLOGY 21, tt CHEMISTRY 25 T (T1) T2 MATHEMATICS 13 19	<p>Afternoon</p> <p>1.30 p.m.</p> <p>CHEMISTRY 2, th ECO. 15, mwf 25, th GEOLOGY 16A, m⁵ GREEK A, m HEBREW 1, tf HISTORY 12, t 24, f PHILOS. 14, mwf RELIGION 2, tf SPANISH 1, mwf 10, mwf</p> <p>2.30 p.m.</p> <p>ECONOM. 10, mwf 20, tt 24, tt COMM. 50, mwf 63, mwf GERMAN 10, mwf HEBREW 2, tf HISTORY 6, w 18A, tt² 18B, tt² 19, m³</p>		BIOCHEMIS. 16, s 18, s BIOLOGY 10, tt CHEMISTRY 14, tt CLASS. LIT. 1 COMMERCE 60 66A 67B ECONOMICS 4 ENGLISH 2 (B1, B2) 15 20 GEOLOGY 20, tt GERMAN 15 GREEK A MATHEMATICS 1 20 23 PHYSICS 2 POLITICS 32 PSYCHOLOGY 20, tt PSYCHOLOGY 26, tt SPANISH A 2	BIOLOGY 16, tt 18, tt CHEMISTRY 1 17, tt 24, tt COMMERCE 52 64 ENGLISH 10 FRENCH 2 3 GEOLOGY 17, t 24, tt GERMAN A 1 HISTORY 14 tt 20 23 MATHEMATICS 2 PHYSICS 10A 12B 21A, t PSYCHOLOGY 8, tt POLITICS 30 35, th (10-11.30) SPANISH 6	ANCT HISTORY 4 BIOLOGY 11, tt 12, tt 17, tt 31, tt CHEMISTRY 11, t 11B, th 22, tt ECONOMICS 12 26A ENGLISH 2, (c1, c2, c3) 19 FRENCH 1 20 23 GEOLOGY 1, tt 14, t 21, t 26, th (T1) HISTORY 6, tt LATIN 2 PHYSICS 1 17B, tt 21A, th PSYCHOLOGY 10, tt PSYCHOLOGY 15, tt
<p>LEGEND</p> <p>In this table the names of the week days are abbreviated to initial letters in lower case italic; t = Tuesday, th = Thursday, & Thursday, th = Thursday. The First and Second Term are abbreviated where applicable) to T1 and T2.</p>		<p>FOOTNOTES</p> <p>POLITICS 35: Monday 2.30 - 4.00 HISTORY 18A and 18B, and POLITICS 35 and 36: 2.30 - 4.00 HISTORY 19: Monday 2.30 - 4.30 ART 3 (studio), Tuesday 3.30 - 5.30 GEOLOGY 16A: Monday, 1.30 - 4.30</p>		<p>2.30 (contd)</p> <p>MUSIC 1, m PHILOS. 27, mwf PHYSICS 11, f POLITICS 35, m² 36, w²</p>		<p>3.30 p.m.</p> <p>ART 3 (studio), t¹ ECONOM. 23, mwf ENGLISH 14, mwf HISTORY 31, tt</p>		<p>4.30 p.m.</p> <p>ART 3, mth MUSIC 1, wf PHYSICS 17B, m</p>	

TIME TABLE of LABORATORY WORK

All laboratory periods are from 1.30 to 4.30 unless otherwise indicated.
 Periods marked (†) are from 1.30 to 3.30. Periods held at other than these times are marked (*) and are shown in detail in the table below.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
BACTERIOLOGY	13	13	13	13	10	— —
BIOCHEMISTRY	20*	— —	16, 18	16, 18	— —	— —
BIOLOGY	1 (Sec. A) †, 16,	10, 18, 20*	1 (Sec. B) †, 17, 20*	11, 20*, 31	19, 20*,	— —
CHEMISTRY	12, 17, 22	12, 14, 15A, 22	11, 25	1†, 2*, 11B, 24	12, 22	22*
GEOLOGY	1*, 16A, 18B†, 25A†	1*, 2*, 24†	1*, 12*, 14†, 26†	10A†, 12†, 13B*, 20*, 21*	11†	10A*, 12*
PHYSICS	— —	1†, 10A†, 12B†, 17B†	1†, 11*	2†, 13B*, 14A*, 22	— —	— —
PHYSIOLOGY	20*	20*	— —	10	10	— —
PSYCHOLOGY	— —	— —	— —	15*	— —	— —

Afternoon Periods

BIOCHEMISTRY	20 —Mon 9-12
BIOLOGY	20 —Tues, Wed, Fri 9-11 Thurs 10-12
CHEMISTRY	2 —Thurs 2.30-4.30 13 —6 hours a week, to be arranged 22 —Mon, Tues, Fri 1.30-4.30; Saturday 9-12
GEOLOGY	1 —Mon, Tues, Wed 1-4 2 —Tues 1.30-3.30 or 3.30-5.30 10a—Thurs 1.30-3.30; Saturday 9-11 12 —Wed 3.30-5.30 (2nd term); Thurs 1.30-3.30 (both terms); Saturday 9-11 (1st term) 13b—Thurs 3.30-5.30 17 —Wed 1.30-5.30 20 —Thurs 3.30-5.30 21 —Thurs 1.30-3.30 or 3.30-5.30
PHYSICS	11 —Wed 1.30-4.30 or 2.30-5.30 13b—Thurs 1.30-3.30 or 3.30-5.30 14a—Thurs 1.30-3.30 or 3.30-5.30
PHYSIOLOGY	20 —Mon, Tues 1.30-5.30
PSYCHOLOGY	15 —Thurs 2-5

History of the University

QUEEN'S UNIVERSITY owes its origin to the desire of the Synod of the Presbyterian Church in Canada, in connection with the Church of Scotland, for a ministry trained within the country. As early as 1832 the Provincial Government had been petitioned "to endow without delay an institution, or professorships, for the education and training of young men for the ministry in connection with the Synod". This and other representations failing of their object, steps were taken by the Synod to found a college at Kingston on the lines of the Scottish National Universities. On 16 October 1841 a Royal Charter was issued by Her Majesty Queen Victoria for the establishment of Queen's College, Kingston, and the first classes were opened in March 1842, with Reverend Dr Liddell as Principal. Funds were provided in part by grants from the Presbyterian Church in Scotland and from the Canadian Government, and in part by liberal subscriptions from the friends of the young and growing University. In 1867-8, however, the withdrawal of the Provincial grant, and the failure of the Commercial Bank, almost brought financial disaster. But the crisis was met by the determination of Principal Snodgrass and other self-denying workers, chief among whom was Professor Mackerras. The country was canvassed for subscriptions and as a result of the widespread interest aroused, \$113,000 was added to the endowment.

In 1877 Principal Snodgrass was succeeded by the Reverend G. M. Grant, who for a quarter of a century built with brilliant success upon the foundation laid by his predecessors. Under him the University gained rapidly in size and prestige. By 1881 Queen's had a new building, an enlarged staff, and a great increase of students. In 1887, as the result of an effort in commemoration of the Queen's Jubilee, \$250,000 was raised, resulting in further extension and in the establishment of new professorships.

Principal Grant died in 1902, and was succeeded in the following year by the Very Reverend D. M. Gordon. In 1916, owing to ill-health, Principal Gordon resigned his position, but continued in office until the autumn of 1917, when the Reverend R. Bruce Taylor was appointed his successor. In 1930 Principal Taylor resigned his position to live abroad and Dr J. C. Connell was appointed Acting Principal. He held this position for four months, until October, when W. Hamilton Fyfe, Headmaster of Christ's Hospital, England, and formerly Fellow of Merton College, Oxford, was installed as Principal of the University. Dr Fyfe resigned in 1936 to accept the Principalship of the University of Aberdeen. Dr Fyfe was succeeded by Principal R. C. Wallace, President of the University of Alberta from 1928 to 1936.

Dr Wallace retired in September 1951, and was succeeded by Principal William A. Mackintosh, the first Queen's graduate to hold the Principalship.

In 1854 the Medical Faculty of Queen's was established. It was re-organized in 1866 as the Royal College of Physicians and Surgeons in affiliation with the University, but in 1891 the original status was resumed.

Queen's led the way in coeducation. As early as 1870 special classes in English and other subjects were formed for women, but Courses leading to a degree were not opened to them until 1878-9. In 1880 co-education was extended to the medical course, and in 1883 a separate Women's Medical College was opened and affiliated with Queen's. It was closed in 1894, as similar facilities were offered in Toronto and elsewhere. In 1943, for the first time in forty-nine years, women were again admitted to the Faculty of Medicine.

The School of Mining was founded in 1893 under an Ontario charter and was under the control of a separate Board until 1916 when it was amalgamated with the University, and now constitutes the Faculty of Applied Science. In 1943 the Faculty of Applied Science admitted women to the Course for the first time.

In 1907 the Ontario Government established at Queen's a second Faculty of Education for the purpose of providing professional training for teachers in the secondary schools of the Province. In 1920, however, the work of the Faculty was discontinued because of the decision of the Government to extend the scope of the Normal Schools and to create in Toronto the Ontario College for Teachers.

Queen's University, though founded by a church, was dedicated to the nation. As its constituency expanded, its constitution was gradually broadened, until finally in 1912, as a result of an amicable arrangement between the Presbyterian Church and the Trustees of the University, an act was passed by the Dominion Parliament removing the last vestige of denominational control.

The endowment of the University is at present almost \$5,671,550 and the annual income, derived from all sources, is over \$1,780,000. The registration has grown from 665 in 1900 to over 6300 in the present session, and Queen's has become nation-wide in its work and influence.

Government and Administration

The administration of the University is vested in the Board of Trustees, the University Council, the Senate, and the Faculty Boards.

THE BOARD OF TRUSTEES

The Board of Trustees consists of *ex-officio* and elective members. The *ex-officio* members are the Chancellor, the Principal, and the Rector. The elective members consist of: one representative from each affiliated college; representatives, as provided for by the Statutes, from the University Council, the Benefactors, and the Graduates; and members elected by the Board of Trustees.

The functions of the Board of Trustees are to manage the finances, to possess and care for the property, to procure legislation, to appoint instructors and other officers, and in general to attend to such external matters as do not relate directly to instruction.

THE UNIVERSITY COUNCIL

The University Council consists of the Chancellor, the Trustees, the members of the Senate, and an equal number of members elected by the graduates from their own members.

The annual meeting of the University Council is held on the day immediately preceding the spring Convocation.

The functions of the Council are:

- (1) to elect the Chancellor, except when two or more candidates are nominated, in which case the election is by registered graduates;
- (2) to elect six Trustees, two of whom shall retire annually;
- (3) to make by-laws governing the elections of (a) the Rector by the registered students, (b) seven Trustees by the benefactors, (c) six Trustees by the University Council, (d) six Trustees by the graduates;
- (4) to discuss all questions relating to the University and its welfare;
- (5) to make representation of its views to the Senate or the Board of Trustees;
- (6) to decide on proposals for affiliation;
- (7) to arrange all matters pertaining to (a) its own meetings and business, (b) the meetings and proceedings of Convocation, (c) the installation of the Chancellor, (d) the fees for membership, registration and voting.

THE SENATE

The Senate consists of: the Principal; the Vice-Principal; the Principal of Queen's Theological College; the Dean of the Faculty of Arts; the Dean of the Faculty of Applied Science; the Dean of the Faculty of Medicine; three Professors elected by the Faculty of Arts; three Professors elected by the Faculty of Applied Science; three Professors elected by the Faculty of Medicine; one Professor elected by the Faculty of Queen's Theological College.

The functions of the Senate are:

- (1) to determine all matters of an academic character which concern the University as a whole;
- (2) to consider and determine all courses of study leading to a degree, including conditions of Matriculation on recommendation of the respective Faculty Boards; but the Senate shall not embody any changes without having previously presented them to the Faculty;
- (3) to recommend to the Board of Trustees the establishment of any additional faculty, department, chair, or course of instruction in the University;
- (4) to be the medium of communication between the Alma Mater Society and the Governing Boards;
- (5) to determine all regulations regarding the social functions of the students within the University, and regarding the University Library and University Reading Rooms;
- (6) to publish the University Calendars;
- (7) to conduct examinations;
- (8) to grant degrees;
- (9) to award University Scholarships, Medals, and Prizes;
- (10) to enforce the Statutes, Rules and Ordinances of the University;
- (11) and generally to make such recommendations to the Governing Boards as may be deemed expedient for promoting the interests of the University.

THE FACULTY BOARDS

The Faculty Boards are constituted as follows:

In the Faculty of Arts and in the Faculty of Applied Science, the Dean, Professors, Associate Professors, Assistant Professors, Lecturers of each Faculty (in Arts, after one year's experience) and the University Librarian have power to meet as separate boards, and to administer the affairs of each Faculty under such regulations as the Board of Trustees may prescribe.

In the Faculty of Medicine, the Dean, Professors, Associate Professors, and Assistant Professors have power to meet as a separate board, and to

administer the affairs of the Faculty under such regulations as the Board of Trustees may prescribe.

The Principal and Vice-Principal are *ex-officio* members of each of the Faculty Boards.

The functions of the Faculty Boards are:

- (1) to recommend to the Senate courses of study leading to a degree, and the conditions of admission;
- (2) to decide upon applications for admission or for change of course, subject to the regulations of the Senate;
- (3) to submit to the Senate names for both ordinary and honorary degrees;
- (4) to arrange the time-table for classes and to edit the Faculty *Calendar*, subject to the approval of the Senate;
- (5) to control registration, and determine the amount of fees and manner of payment, subject to the regulations of the Senate and the approval of the Board of Trustees;
- (6) to deal with class failures;
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- B. ROSE, B.Sc. (Queen's), Ph.D. (Yale), F.R.S.C., F.G.S.A. *Professor of Geology* 208 Albert Street
- M. M. ROSS, B.A. (New Brunswick), M.A. (Toronto), Ph.D. (Cornell). *Professor of English* 256 Willingdon Avenue
- MARION ROSS, B.A. (Queen's), M.A. (Columbia). *Assistant Professor of Physical and Health Education* 123 Union Street West
- B. W. SARGENT, M.B.E., M.A. (Queen's), Ph.D. (Cantab.), F.R.S.C. *Professor of Physics and Head of the Department* 751 Johnson Street
- MARGARET E. M. SAWYER, M.A., Ph.D. (McGill). *Assistant Professor of Physiology* Royal Military College Grounds
- R. E. SEMPLE, M.A. (British Columbia), Ph.D. (Columbia). *Assistant Professor of Physiology* Queen's University
- GLEN SHORTLIFFE, M.A. (Alberta), Ph.D. (Cornell). *Associate Professor of French* Cartwright's Point
- D. W. SLATER, B.Com. (Manitoba), B.A. (Queen's). *Assistant Professor of Economics* Apt. 3, 132 Earl Street
- R. G. H. SMAILS, B.Sc. (Econ.) (London), A.C.A. (Eng.), F.C.A. (Ont.). *Director of the School of Commerce and Administration and Professor of Commerce* 52 Kensington Avenue
- S. E. SMETHURST, M.A. (Cantab.). *Professor of Classics* Bath Road P.O.
- A. H. SMITH, M.A. (Queen's), Ph.D. (Toronto). *Associate Professor of Psychology* Apt. 1A, 132 Earl Street

The Faculty

- W. E. L. SMITH, M.C., M.A. (Toronto), Ph.D. (Edinburgh). *Associate Professor of History*
R.R. No. 2, Kingston
- W. M. SMITH, B.Sc. (New Brunswick), Ph.D. (McGill), Ph.D. (Cantab.).
Associate Professor of Chemistry 40 Napier Street
- J. E. SMYTH, M.Com. (Toronto), C.A. *Associate Professor of Commerce*
61 Hill Street
- GEORGE SWINTON, B.A. (McGill). *Assistant Professor of Art* (Session 1953-4)
Queen's University
- H. L. TRACY, B.A. (Toronto), Ph.D. (Chicago). *Professor of Classics, Head of the Department of Classics and Director of the Summer School*
260 Johnson Street
- L. E. H. TRAINOR, M.A. (Saskatchewan), Ph.D. (Minnesota). *Assistant Professor of Physics*
94 College Street
- A. D. TUSHINGHAM, B.D., Ph.D. *Lecturer in Hebrew* Queen's University
- M. C. URQUHART, B.A. (Alberta). *Associate Professor of Economics*
536 College Street
- J. L. USHER, B.A. (Sask.), M.Sc., Ph.D. (McGill). *Assistant Professor of Geology*
130 Carruthers Street
- J. R. W. VALLENTYNE, B.A. (Queen's). *Lecturer in Biology under the R. Samuel McLaughlin Trust Fund*
R.R. No. 3, Gananoque
- C. J. VINCENT, B.A. (University of Western Ontario), A.M., Ph.D. (Harvard). *Professor of English*
105 Hill Street
- E. A. WALKER, M.A. (Cantab.). *Associate Professor of English*
251 Willingdon Avenue
- E. E. WATSON, M.Sc. (McGill), Ph.D. (Cantab.). *Professor of Physics and Chairman of Undergraduate Studies in Physics*
82 Traymoor Avenue
- D. G. WERTHEIM, B.A. (McMaster), M.A. (Toronto). *Instructor in Mathematics*
152 University Avenue
- A. S. WEST, B.Sc. (Mass. State), Ph.D. (Yale). *Professor of Biology*
233 Willingdon Avenue
- A. G. C. WHALLEY, M.A. (Oxon.), M.A. (Bishop's), Ph.D. (London).
Associate Professor of English 106 Barrie Street
- F. M. WOOD, M.A., B.Sc. (Queen's). *Professor of Mathematics*
79 College Street

The Faculty: Assistants and Tutors

Part-time Instructors, Teaching Fellows, and Assistants

- MARGARET ANGUS, B.A. (Montana). *Assistant in Drama*
20 Beverley Street
- ELSPETH H. BAUGH, B.A. (Queen's), A.M. (Michigan). *Instructor in Psychology*
118 Gore Street
- R. J. GIBBINS, M.A. (Queen's). *Instructor in Psychology*
607 Earl Street
- R. A. JONES, M.Sc. (Western), Ph.D. (McGill). *Instructor in Chemistry*
249 Macdonnell Street
- C. L. LEWIS, M.Sc. (Queen's). *Research Assistant in Geology*
297 Helen Street
- MURIE MEISEL, B.A. (Toronto). *Instructor in Art* 587 Johnson Street
- MARGARET E. REID, M.A. (Toronto). *Instructor in Spanish*
442 Nelson Street North
- DUNCAN ROBERTSON, B.A. (Toronto), M.A. (Johns Hopkins). *Assistant in English*
35 George Street
- YVONNE BROWN, B.A., (McMaster). *Teaching Fellow in English*
Queen's University

Tutors for Session 1952-3

- Bacteriology*: E. W. R. CAMPSALL, B.A. (Queen's), M.D. (McGill).
- Biochemistry*: MARGARET A. CURRIE, M. DE WOLFE, MARY S. KROTKOV.
- Biology*: R. G. S. BIDWELL, M.A. (Queen's), D. V. CLARKE, J. H. DAY, E. T. GARSIDE, JOAN I. HANSON, G. W. MASTIN, P. F. MAYCOCK, NORMA W. MILLER, G. T. MORGAN, M.Sc. (New Brunswick), J. MYERS, C. R. MACLELLAN, B.Sc. (McGill), CLAIRE A. NARRAWAY, C. D. NELSON, M.A. (Queen's), YVONNE H. SWABEY, C. L. THACKER, C. J. WHITELAW.
- Chemistry*: D. N. CUNNINGHAM, H. L. GEORGE, A.B. (Hamilton College), H. H. GIBBS, B.Sc. (Queen's), L. H. HARROW, ROBIN K. HOWLAND, A. KAHN, B.Sc. (McGill), O. R. LUNDELL, JOYCE M. MATHIESON, J. E. SCANLON, B.S. (Georgetown), G. W. TAYLOR, B.A. (Queen's), J. L. THOMPSON, IRMA M. J. WEST.
- Classics*: GRACE P. ABRAMS, ROSEMARY J. DOUGHERTY, ELIZABETH C. O'NEILL, K. R. THOMPSON, F. J. WILSON, M.A. (Queen's).
- Commerce*: MRS. E. E. BRONSKILL, B. Com. (Queen's).

The Faculty: Tutors

- English:* S. C. GEEN, B.A. (McMaster), PATRICIA M. GERMAN, W. T. HAMILTON, SHARON A. HAW, E. GEORGIA JOHNSON, C. E. KELSO, ELIZABETH A. LUDGATE, MARGARET E. MCKENZIE, R. A. O'BRIEN, B.A. (Western), B.L.S. (McGill), CAROL J. SMITH, D. H. TAYLOR, F. J. WILSON, M.A. (Queen's).
- French:* MRS. A. R. C. DUNCAN, MRS. R. L. FAUCONNIER, L-ès-L.
- Geological Sciences:* J. O. G. ALLARD, B.A. (Montreal), H. D. CARLSON, M.Sc. (Toronto), D. J. EMERY, B.Sc. (Western), R. W. GINN, W. O. J. GROENEVELD-MEIJER, Dipl. Ing. (Swiss Institute of Technology), L. B. HALFERDAHL, B.Sc. (Queen's), P. LECOMTE, B.A.Sc. (Ecole Polytechnique de Montréal), C. L. LEWIS, M.Sc. (Queen's), J. G. MACDONALD, W. J. PEARSON, M.A. (Saskatchewan), Y. RIMSAITE, E. R. ROSE, M.A. (Queen's), J. E. G. SCHWELLNUS, B.Sc. (Witwatersrand), P. SAUVE, B.A.Sc. (Ecole Polytechnique de Montréal), R. J. TRAILL, M.Sc. (Queen's), W. G. WEGENAST, B.Sc. (Queen's).
- German:* MRS. R. E. MACNINTCH, M.A. (Queen's), C. J. SCHAU, MRS. JULIA WIEDNER.
- History:* M. V. R. DAFOE, B.A. (Manitoba), D. M. FARRELL, B.A. (St. Francis Xavier), G. SMITH, B.A. (Queen's), F. J. WILSON, M.A. (Queen's).
- Mathematics:* FRANCES A. BOUCK, H. E. CLARKE, E. L. EARL, B.A. (Queen's), N. E. HENRICKS, SHIRLEY M. O'BRIEN.
- Philosophy:* CAROLYN E. JENKINS, R. L. JONES, C. D. MACNIVEN, MRS. P. N. S. TROTMAN, M.A. (Oxon.).
- Physical Education:* MARGARET A. FERGUSON, R. A. KELLY.
- Physics:* N. E. BOOTH, B.A. (Toronto), S. B. BROWN, W. R. DIXON, M.A. (Saskatchewan), J. A. KUEHNER, B.Sc. (Bishop's), T. J. ROCK, B.A. (Queen's), R. S. STOREY, B.A. (Queen's), MRS. L. E. H. TRAINOR, M.A. (Saskatchewan).
- Political and Economic Science:* D. R. BALL, J. C. CROSBIE, W. F. DAWSON, B.A. (Toronto), HARRIET E. EMPEY, E. L. FOWLIE, J. E. KERSELL, M. JEAN MACLEOD, B.A. (Dalhousie), J. C. R. OLIVER, P. PETROPOULOS, I. V. STEWART, GAIL I. WARD, P. N. WIDDRINGTON, F. J. WILSON, M.A. (Queen's).
- Psychology:* W. C. CLARK, B.A. (Queen's), H. JEAN FOSTER, B.A. (Queen's), MRS. B. PETERS, B.A. (Toronto), AUSMA RABE.
- Spanish:* MRS. A. M. FOX, B.A. (McMaster), MRS. H. R. JOHNSTON, MRS. J. G. SMITH, B.A. (Toronto).

Equipment and Special Features

Library Service

Library Staff

University Librarian: H. PEARSON GUNDY, M.A. (Toronto)

Cataloguing Division: JESSIE W. DYDE, B.A. (Queen's), B.S. (Columbia), Head; HELEN KELLEY, B.A. (Queen's), B.L.S. (Toronto).

Loan and Reference Division: MELVA EAGLESON, B.A. (Queen's), B.L.S. (Pratt), Head; DIANA BLAKE, B.A. (Queen's), MARGARET WASHINGTON, B.A. (Queen's), *Assistants*.

Acquisitions and Inter-library Division: ELEANORE M. ELLIOTT, B.A. (Hon.), Dip.Ed. (Lond.), Head; Assistant to be appointed.

Government Documents Division: HOWARD A. VERNON, M.A., Ph.D. (Chicago), B.L.S. (Minnesota).

Medical Librarian and Assistant: to be appointed.

Clerical Assistants: MARGARET HARRISON, EDITH KING, AURIOL MCINTOSH, MARY ROTHWELL.

Library Instruction

By action of the Faculty of Arts, all first year students in Arts are required to attend, during the fall term, a short course of instruction in the use of the library conducted by senior members of the library staff. Students are assigned to groups for two seminar periods. Announcements of the time and place of meetings are posted on the library bulletin board early in October.

Library Hours

Monday to Friday	Reading Room and Reserved Books Department, 8 a.m. to 10.30 p.m. Circulation and other services, 9 a.m. to 5 p.m.
Saturday	Reading Room and Reserved Books Department, 8 a.m. to 4 p.m. Circulation and other services, 9 a.m. to 12.30 p.m.
Sunday	Reading Room and Reserved Books Department only, 2 p.m. to 5 p.m.

The Douglas Library

The Douglas Library, named for JAMES DOUGLAS, LL.D. (Chancellor, 1915-19), was opened in 1924, after the book collection had been moved from rooms in the Old Arts Building. The nucleus of the library was formed in 1841 by gifts of books from Judge MITCHELL of Vittoria, and from the Synod of the Presbyterian Church. First stored in the tower of old St. Andrew's Church, it was moved three times before 1854 when the University purchased "Summerhill". The library was then housed in one of the rooms in the central block, now part of the Medical Library. The first library catalogue, published in 1853, listed 2100 books. By 1860, when a new catalogue was issued, the library had doubled in size; and a third catalogue, in 1875, included about 10,000 volumes. The library was moved in 1880 to the west end of the Old Arts Building, until the Douglas Library was built.

The library owes much to the foresight and initiative of Dr ADAM SHORTT, the Sir John A. Macdonald Professor of Political Science 1881-1908, who also served as Librarian, 1890-9. Dr SHORTT inaugurated the card catalogue and laid well the foundations of the Canadian section, which now, with the addition of the LORNE PIERCE COLLECTION OF CANADIANA, provides research resources of outstanding importance. Also noteworthy are the McNICOL COLLECTION of books and manuscripts relating to telecommunication, the SHORTT-HAYDON COLLECTION of portraits and historical prints, the AUSTIN STAMP COLLECTION, and the MAP ROOM which contains over 6000 maps.

The library regularly receives over 1000 current periodicals. The book stock approximates 250,000 volumes, including extensive holdings of government documents. The card catalogue indexes all catalogued items; the system of classification is that of the Library of Congress.

The Medical Library

The Medical Library is housed on the first floor in the central block of "Summerhill", reconditioned for library purposes in 1952. Entrance is from the medical quadrangle. The library comprises, in addition to stacks, a medical reference room, two periodical rooms, and a faculty reading room.

Departmental Libraries

The following university departments have separate library accommodation, under the control of the central library in which supplementary holdings are housed for all departmental libraries.

Chemistry Gordon Hall
Biochemistry Craine Building

Museums, Laboratories

<i>Biology</i>	Old Arts Building
<i>Chemical Engineering</i>	Gordon Hall Extension
<i>Electrical Engineering</i>	Fleming Hall
<i>Geological Sciences</i>	Miller Hall
<i>Mechanical Engineering</i>	McLaughlin Hall
<i>Mining and Metallurgy</i>	Nicol Hall
<i>Physics</i>	Ontario Hall
<i>Psychology</i>	126 Union Street

The hours of the departmental libraries are determined by the departments concerned.

The Museums

The MILLER MEMORIAL MUSEUM, named in memory of the late WILLET G. MILLER, formerly Provincial Geologist of Ontario, has been erected for the Department of Geological Sciences. The main floor is entirely devoted to museum purposes and contains among other things an excellent collection of economic minerals used in industrial processes; a collection of at least a thousand mounted individual crystals; large collections illustrating the systematic classification of minerals and rocks; another illustrating the ores found particularly in Canadian mines, a stratigraphic assembly of rocks and a paleontological collection illustrating the geologic life record. The museum is now being reorganized by Emeritus Professor M. B. BAKER.

An ethnological collection of weapons, utensils, dresses and ornaments is also housed in the east wing of the museum.

The BIOLOGICAL MUSEUM, in the Old Arts Building, has a large botanical collection illustrating the flora of North America, Europe, Asia, South Africa, and Australia; a zoological collection representing the Canadian fauna by a large number of prepared specimens of mammals, birds, reptiles, fishes, insects, and mollusca.

The Laboratories

The BIOLOGICAL LABORATORIES are in the basement and on the main and the third floor of the Old Arts Building. These consist of laboratories for General Botany, Advanced Botany, Plant Physiology, Invertebrate Zoology and Vertebrate Zoology. For graduate work and research special laboratories are available for investigations in the following fields: plant pathology, cytology, plant physiology, research with radioactive isotopes, paper chromatography, entomology with special emphasis on insect pathology and insects as disease vectors, fresh water biology. A special re-

search greenhouse and a room for photographic work are included in the facilities of the Department.

The CHEMICAL LABORATORIES are in Gordon Hall to which a large extension was added in 1949 to provide additional accommodation for Chemistry and to house the Department of Chemical Engineering. In the older building there are laboratories for Electrochemistry and Medical Organic Chemistry on the fourth floor, three laboratories for General Chemistry on the third floor, three laboratories for Quantitative Analysis and one for Organic Chemistry on the second floor, and three for Qualitative Analysis on the first or basement floor. On the fourth floor of the extension are laboratories for Physical and Colloid Chemistry; the third floor contains several offices, numerous research laboratories and a workshop. The second floor has a large laboratory for Organic Chemistry adjoining the Organic laboratory of the older building. In this portion of the building there are a considerable number of research laboratories as well as professorial offices and private research laboratories. The laboratories contain much special research apparatus.

The PSYCHOLOGICAL LABORATORY is situated at 126 Union Street. It contains a room equipped with a one-way screen for observing children being given tests, an extensive library of tests, a library of psychological periodicals and a small library of psychological films. It has seminar and research rooms. The apparatus available includes standard equipment for research and for demonstrations in psychology. There is a small workshop for the construction of apparatus and a dark room.

The GEOLOGICAL AND MINERALOGICAL LABORATORIES which are in Miller Hall are well equipped for both regular class work and research. They include large laboratories for mineral study, blowpipe analysis, general geology, and smaller ones for microscopic study of thin sections of minerals and rocks, and polished sections of ores. Individual collections of minerals, rocks, and ores are readily available. In addition there are a map room, a drafting room, a chemical laboratory, a sedimentation laboratory and dark rooms for optical, goniometric and photographic work. Research laboratories are equipped with modern X-ray spectrometers for crystal study, a two metre grating spectograph, a variable source power unit, and various electric furnaces for high temperature experiments. A technician is available for the preparation of both thin sections and polished sections and a well equipped small machine shop is in his charge.

The PHYSICAL LABORATORIES are in Ontario Hall. The basement contains a research workshop, a liquid air plant, a large elementary laboratory, rooms for advanced instruction in optics and in heat, and re-

Laboratories, Field Work, Athletics

search rooms. An electron synchrotron, manufactured by the General Electric Company, was installed for research purposes in 1950. It is the only instrument of its type in operation in Canada. The synchrotron accelerates electrons to an energy of seventy million electron volts and produces X-rays. The interactions of these high energy X-rays with the electrons and nuclei of atoms are being studied. In order to provide shielding against the penetrating X-rays, the synchrotron is located in an underground room, with a control desk at ground level. On the main floor of Ontario Hall there are several laboratories for first and second year classes, a laboratory for atomic and nuclear physics, two lecture rooms, and a room suitable for lectures and for working problems. The second floor has two large rooms, laboratories for advanced work in mechanics, electrical measurements, and X-rays, a standard laboratory, and a library. On the third floor there are research rooms, a workshop for the use of graduate students and members of staff, a storage battery room, and the departmental stores.

Facilities for Field Work

GEOLOGICAL SCIENCES. In the vicinity of Kingston a greater variety of economic minerals and metalliferous ores is mined than in any similar area in Canada. Through the kindness of the managers the various mines may be visited by the Geology classes, and students may thus obtain valuable information concerning field conditions.

BOTANY AND ZOOLOGY. Exceptionally good facilities for field study are provided in the vicinity of Kingston by the great diversity of land surfaces and bodies of water. A wide range of plant and animal associations are within easy reach of the University. The University has an experimental station on Lake Opinicon, thirty-two miles from Kingston, for research in land and water biology.

Facilities for Athletics

Queen's University provides ample facilities for athletics. The gymnasium is one of the finest in Canada with a swimming pool of full olympic size. In the University grounds is a large covered skating rink with artificial ice. Adjoining the University is the football field, with the George Richardson Memorial Stadium, given by Dr JAMES RICHARDSON, formerly Chancellor of the University, in memory of his brother, Captain GEORGE RICHARDSON, a graduate of Queen's and a former athlete who was killed in the Great War. There is room and equipment for all students who wish to take part in football, hockey, badminton, basketball, field hockey, tennis, track

athletics, archery, swimming, diving, boxing, and wrestling. Exceptionally good facilities for skiing are available at Kingston Mills, about five miles from the University proper.

The Music Room

The MUSIC ROOM in the Douglas Library is furnished and equipped for music study and listening. It contains a collection of gramophone records which is based on the original Carnegie gift and now numbers some three thousand records. The collection is representative in both classical and contemporary fields and gives the students an unusual opportunity for musical experience. The equipment also includes a radio-phonograph of the highest fidelity available and a Steinway grand piano. The room is open to the general student body every evening during the session, and is also made available for the important operatic and symphonic week-end broadcasts.

The University Concert Series

The University Concert Series is available to students for \$3 and \$4 for the season.

The series for 1953-4 includes the St. Paul's Cathedral Choir; the Hossack Trio (cello, violin, and harp); Parson and Poole, duo-pianists; the North Toronto Collegiate Symphony Orchestra.

General Information

DEGREES

By the Royal Charter granted to Queen's College, it is "willed, ordained and granted, that the said College shall be deemed and taken to be an University, and that the students in the said College shall have the liberty and faculty of taking the degree of Bachelor, Master, and Doctor in the several Arts and Faculties". The degrees at present conferred under the statutes of the University are as follows:

HONORARY DEGREES

Doctor of Divinity, D.D.; Doctor of Laws, LL.D.; Doctor of Science, D.Sc.

DEGREES BY EXAMINATION

Arts—Bachelor of Arts, B.A.; Bachelor of Commerce, B.Com.; Master of Arts, M.A.; Master of Commerce, M.Com.; Doctor of Philosophy, Ph.D.

Theology—Bachelor of Divinity, B.D.

Medicine—Doctor of Medicine, M.D.; Master of Surgery, C.M.; Master of Science, M.Sc.(Med.).

Applied Science—Bachelor of Science, B.Sc.; Master of Science, M.Sc.

Nursing—Bachelor of Nursing Science, B.N.Sc.

Physical and Health Education—Bachelor of Arts, B.A.; Bachelor of Physical and Health Education, B.P.H.E.

DIPLOMAS

Medicine—Diploma of Public Health, D.P.H.; Diploma in Medical Radiology, D.M.R.

Nursing—Diploma in Public Health Nursing; Diploma in Teaching and Supervision in Hospital Schools of Nursing.

HOODS

Each degree has its distinctive hood, as follows:

B.A. Black, bordered with red silk

B.Com. Black, bordered with green silk

General Information

B.P.H.E.	Black, bordered with red silk, bordered with white silk
M.A.	Black, lined with scarlet silk, bordered with scarlet silk
M.Com.	Black, lined with green silk, bordered with green silk
B.D.	Black, lined with purple silk, bordered with purple silk
M.D. and C.M.	Scarlet silk, bordered with white silk
M.Sc.(Med.)	Scarlet silk, lined with white silk, bordered with white silk
B.Sc.	Black, bordered with yellow (old gold) silk
M.Sc.	Black, lined with yellow silk, bordered with yellow silk
B.N.Sc.	White silk, bordered with scarlet silk
D.Sc.	Yellow silk, bordered with black
D.D.	Purple silk, lined with white silk, bordered with white
LL.D.	Black silk, lined with blue silk, bordered with blue
Ph.D.	Black silk, lined with purple, bordered with white

COUNCIL OF LEGAL EDUCATION OF GREAT BRITAIN

Queen's University has been approved by the Council of Legal Education of Great Britain and her degree examinations now qualify students for admission at any one of the four Inns of Court. Regulations for entry at any one of the Inns may be seen at the office of the Registrar.

THE STUDENTS' MEMORIAL UNION

The first Students' Memorial Union, which was built to commemorate the service of students and graduates of Queen's University in the First World War, was destroyed by fire in September 1947, immediately before the opening of the session. Temporary dining and lounging accommodation for men students was arranged in McLaughlin Hall and reconstruction on the Union was begun at once. By September 1948 the Great Hall, the coffee shop and some lounge rooms were ready for use. The completed building was opened formally in October 1949.

Every male student is a member of the Union, which is really a club where the men of all faculties may meet in a University building designed for that particular purpose and privilege. There are the usual club facilities, a dining hall, lounge and billiard rooms, reading rooms, committee rooms, and guest rooms for alumni and visitors to the University.

CO-OPERATIVE RESIDENCES

Berry House and Collins House, operated by the Science '44 Co-operative Inc., are open to men students of all faculties. Room and board for the

Women Students

session 1952-3 was \$11 a week. For further information write to the Membership Committee, 329 Earl Street, Kingston, Ontario, enclosing a self-addressed stamped envelope.

INFORMATION FOR WOMEN STUDENTS

The Dean of Women has offices in both the New Arts Building and Ban Righ Hall and will welcome enquiries from students regarding anything pertaining to their academic life or other problems before and throughout their university Course.

Accommodation for about 275 women students is provided in Ban Righ Hall and its new Adelaide Wing and in four nearby annexes, Goodwin House, Gordon House, Matheson House and Baker House. All first year students, not resident in the city of Kingston, are expected to live in one of the university residences, and approximately 160 places will be held until mid-September for new students; but if this number prove insufficient the additional new students will be assisted in finding suitable lodgings and will be expected to come to Ban Righ Hall for meals. Permission to make arrangements other than the above must be obtained from the Dean of Women. About 115 upper year students will be in residence.

Ban Righ Hall is to some extent a centre for all women students. It has two common rooms and two dining halls, the latter, with cafeteria service at noon, being available to non-resident students for lunch.

During the summer the University residences are open for the benefit of all women students attending the Summer School and the services of the Housing Office are also available.

Application forms for admission to the University residences and an information leaflet regarding rates, residence rules, etc. may be obtained from the office of the Dean of Women.

Gymnasium Costume. A regular gymnasium costume is worn by women students. This may be ordered at the first gymnasium class in the fall term. White badminton shoes and socks are worn with the suit. Any bathing suit may be worn in the University swimming pool.

Co-operative Residences. Boucher House, operated by the Science '44 Co-operative Inc., is open to women students who have completed their first academic year. Room and board for the session 1952-3 was \$11 a week. For further information write to the Membership Committee, 144 Lower Albert Street, Kingston, Ontario, enclosing a self-addressed, stamped envelope.

EXPENSES

At the present time the average cost of a student's board is from \$10 to \$12 a week and for a room from \$4.50 to \$6 a week.

Lists of boarding houses for men students may be obtained from the Secretary, Housing Bureau, Queen's University. Meals may be obtained at the cafeteria in the Students' Union.

For other expenses, see p. 45, FEES.

PHYSICAL WELFARE OF STUDENTS

HEALTH INSURANCE

Queen's University administers a Health Insurance Fund by arrangement with the Alma Mater Society and the London Life Insurance Company. The fund is derived from a special fee of \$12.50 paid by each winter student and is used to provide medical and hospital care as follows:

Medical Care

The services of the University Medical Officer are available to students without charge.

Office: Kingston General Hospital—Telephone 22821. Entrance by way of the Ambulance driveway (on Stuart Street, west of Front Entrance), turning left and up the short flight of steps.

Hours: Monday, Tuesday, Thursday, Friday—Women: 4.15 to 4.45 p.m.
Men: 4.45 to 5.45 p.m.

Wednesday and Saturday—Women: 12:30 to 1 p.m.

Men: 1 to 1.30 p.m.

A charge of \$2.00 is made by the Medical Officer for calls to the students' rooms. A student may choose another physician or obtain the services of a specialist, surgeon, or consultant, but the University pays no part of the charge thus incurred, except as follows: If, in the opinion of the Medical Officer, the services of a specialist or consultant are required, the University undertakes to contribute toward the payment of the specialist's fee, \$5.00 for any one disability but will make no payment for dentistry, optometry, X-rays, massage, electrical therapy, and similar special treatments.

The cost of filling prescriptions is not provided by the University. The Kingston General Hospital, between the hours of 3.30 and 4.30 p.m. will fill prescriptions at cost *plus* 10 per cent.

Hospital Care

Of the student fee of \$12.50, \$10.75 is paid to the London Life Insurance Company for the following services:

General Information

(a) Hospital services, including room, food, regular floor nursing service, and special services up to \$27.50 for any single illness, are provided from the day of registration until the final examination is written, to the extent of \$5.50 per day. Any additional payment must be made by the student. Payment is limited to thirty-one days for any single illness and will not cover hospitalization of less than eighteen hours. The medical care is provided by the University through the University Medical Officer.

(b) Surgical treatment, including treatment of injuries, is provided without restriction as to the time of hospitalization. The student may choose his own surgeon.

(c) If special nurses over and above the regular staff are required or engaged the cost must be borne by the patient.

PHYSICAL EXAMINATION

All students registering for the first time at a winter session are required to submit a doctor's certificate indicating that they are in good physical condition.

X-RAY CHEST SURVEY

By a regulation of the Senate of the University the students in the first and fifth years of the Medical Faculty and the first and final years of the other faculties and schools are required to have an X-ray examination of the chest each year. An appointment is made for each student and anyone who fails to report is required to take the X-ray at some time later at his own expense.

CERTIFICATE COVERING ABSENCE FROM CLASS

A student not receiving hospital care but alleging illness as a reason for missing lectures or laboratory work must present a doctor's certificate immediately at the close of treatment in order to receive consideration.

VACCINATION

Every student registering for the first time must submit evidence of successful vaccination against smallpox.

STUDENT SELF-GOVERNMENT

Queen's was the first University in Canada to introduce student self-government. All students are members of the Alma Mater Society, the chief instrument of student government, and are expected to share in its duties and responsibilities.

ALMA MATER SOCIETY LECTURE

In 1939, as a contribution from the student body to the Centenary Endowment Fund, the Alma Mater Society gave the University its accumulated reserve of \$1,711. The income is used to provide an annual lecture known as the Alma Mater Society Lecture.

FRATERNITIES

By resolution of Senate no student registered with the University may form or become a member of any chapter of any externally-affiliated fraternity or sorority at or near Kingston.

MILITARY SERVICES

UNIVERSITY NAVAL TRAINING DIVISION

The University Naval Training Divisions have been established by the Department of National Defence to select and train suitable young university students for commissioned rank in all branches of the Royal Canadian Navy (Regular and Reserve Forces).

The training programme consists of twenty drill nights per academic year for three winter and two full summer periods of not less than fourteen weeks. The winter training is carried on at the Naval Division in Kingston, HMCS CATARAQUI. The summer training may be taken at the RCN Barracks in Halifax, N.S. or Esquimalt, B.C. and includes training afloat in RCN ships. Cadets are paid for all training and the uniform is provided.

Each year a limited number of students is accepted into the programme to maintain the established complement. They are enrolled as Probationary Cadets in the first month of the academic year and are confirmed in rank before the first winter session is completed. Upon successful completion of the training programme cadets are promoted and may take appointments as junior officers in the RCN (Regular or Reserve Forces). Students from any faculty are eligible. For information write to The Commanding Officer UNTD, Queen's University, HMCS CATARAQUI, Kingston, Ontario.

CANADIAN OFFICERS' TRAINING CORPS

The Queen's University Contingent of the COTC, formed in 1914 by Lt.-Col. A. B. CUNNINGHAM and re-organized following the First World War by Colonel A. MACPHAIL, C.M.G., D.S.O., is now commanded by Major R. J. KENNEDY, M.C.

General Information

The object of the COTC training policy is to qualify selected University undergraduates for commissions on graduation in the various corps of the Reserve Force, and Supplementary Reserve Force of the Canadian Army. Students in the regular army under the Regular Officers' Training Plan train along with those taking the normal COTC training.

The training programme consists of short theoretical courses in Military Studies at the University and two or three summer courses of four months at the Active Force School or Units at officers' rates of pay.

R.C.A.F. RESERVE UNIVERSITY SQUADRON

The Reserve University Squadron (Queen's) was organized in 1949 and is commanded by Squadron Leader J. E. WRIGHT.

Selected undergraduates are given lectures on general subjects and in the summer months attend R.C.A.F. Schools at which they receive training in the Aircrew, Technical or non-technical branch of their choice. Cadets are paid for both winter and summer training.

Cadets are given three years training and are appointed as Officers in the R.C.A.F. (Reserve) on completion of their course.

For undergraduates who may wish to make the R.C.A.F. a career, the opportunity exists for such students to apply for permanent commissions under the Regular Officers' Training Plan or the R.C.A.F. Subsidization Plan.

EMPLOYMENT SERVICE

An Employment Service has been in successful operation at the University for several years. It is under the jurisdiction of the Service Control Committee of the Engineering Society and administered by the Secretary of the General Alumni Association. It is financed by the Engineering Society and the University. The objects of the Service are to assist graduates in all Faculties to secure suitable positions, and to help students to obtain work during vacation periods. Communications should be addressed to the Manager, Employment Service, Queen's University.

REGISTRATION

Intramural students must register in person, paying full fees for the session. Those registering before the opening of the session are charged the regular fee, but those registering on or after the first day of the session are charged an extra fee of \$5. In addition those who have not previously obtained permission to defer registration must pay a special late fee of \$3 a day from 22 September to 3 October, if registering in the first year, from 24 September to 3 October, if registering in an upper year. No student may register after 3 October unless he has obtained special permission before the opening of the session. For extramural registration see pp 36-8.

Admission to the Faculty of Arts

Candidates desiring to enter the Faculty of Arts should make application during the summer on forms supplied by the Registrar. The application should be accompanied by matriculation or other certificates. These will be returned when the candidate's standing has been determined.

Admission by Matriculation

Matriculation examinations are conducted for the universities of Ontario by the University Matriculation Board. Details regarding these examinations may be found in a separate publication entitled *Admission Requirements*. This booklet contains also a list of the Entrance and Matriculation Scholarships and the conditions of award.

Students seeking admission to the Faculty of Arts must have fulfilled the following requirements: (a) The Secondary School Graduation Diploma or its equivalent, including English, a second language, History, Mathematics and two options; and (b) Grade XIII standing or its equivalent in English, Latin (two papers) or Mathematics (at least two papers)* and two or three other subjects. Students entering with as few as four subjects—that is, English, Latin or Mathematics and two others—are required to have not lower than third class Honours standing in at least three of these subjects and are conditioned in the subject in which they lack standing. This condition may be removed by writing off the Grade XIII paper or papers in the subject concerned, or by taking an extra course at the University.

Grade XIII examinations are held in the following subjects: Latin, English, History, Mathematics (Algebra, Geometry, Trigonometry, and Problems), Greek, German, French, Spanish, Italian, Music, Physics, Chemistry, Biology. The pass standard is fifty per cent in each paper.

Candidates with the Interim First Class Certificate who have successfully qualified for the Permanent First Class Certificate by attending a

* Candidates entering MATHEMATICS 2 with standing in only two parts of Grade XIII Mathematics are required to attend a tutorial class and pass an examination in the third part before receiving credit for MATHEMATICS 2.

Admission: Matriculation

second year at an Ontario Normal School are allowed towards an Arts degree one course in each of English and History.

A complete outline of the courses for the Honours degree is given under every subject in the departmental regulations. Candidates for admission to Honours Courses should write the Grade XIII papers in the two subjects which will be the major and minor for the degree of B.A., and three others chosen from the compulsory courses on the degree programme they wish to follow. *The most useful selection of subjects is listed under the various courses. Other selections are acceptable but must include English and Latin or Mathematics.* Candidates preparing for Honours in English and History are advised to take in Grade XIII

English (Literature and Composition)

History

Latin (Authors and Composition)

one of French (Authors and Composition)

German (Authors and Composition)

Greek (Authors and Composition)

one of Biology (Botany and Zoology), Chemistry, Physics.

Similarly candidates for Honours in Modern Languages are advised to take Grade XIII

English (Literature and Composition)

Latin (Authors and Composition)

two of French (Authors and Composition), German (Authors and Composition), Spanish (Authors and Composition)

one of Biology (Botany and Zoology), Chemistry, Physics.

Candidates interested in Honours Classics are advised to take

English (Literature and Composition)

Latin (Authors and Composition)

Greek (Authors and Composition)

one of Biology (Botany and Zoology), Chemistry, Physics

a fifth subject which may be freely chosen.

Candidates interested in a course in History or Economics or Philosophy are advised to take

English (Literature and Composition)

History

Latin (Authors and Composition) or Mathematics (at least two of Algebra, Geometry, Trigonometry)

one of Biology (Botany and Zoology), Chemistry, Physics

one of French (Authors and Composition)

German (Authors and Composition)

Greek (Authors and Composition)

Admission: Matriculation

Candidates preparing for a course in Mathematics are advised to take

English (Literature and Composition)

Mathematics (Algebra, Geometry, Trigonometry)

Physics

one of French (Authors and Composition), German (Authors and Composition)

one of a language, a science, or History.

Candidates for a course in science are advised to take

English (Literature and Composition)

Mathematics (Algebra, Geometry, Trigonometry)

one of French (Authors and Composition), German (Authors and Composition)

two of Chemistry, Biology (Botany and Zoology), Physics, selected so as to give standing in the two sciences in which the candidate wishes to proceed.

Candidates preparing for Commerce are advised to take

English (Literature and Composition)

Mathematics (Algebra *, Geometry, Trigonometry)

one of Biology (Botany and Zoology), Chemistry, Physics
a language

one of History, a language or a science not already offered.

Candidates preparing for the General Course are advised to take

English (Literature and Composition)

Latin (Authors and Composition) or Mathematics (at least two of Algebra, Geometry, Trigonometry—see (b), page 31.

three further subjects which may be selected at will from the subjects of Grade XIII (see page 31).

Candidates preparing for the Combined Course leading to degrees in Arts and in Physical and Health Education are advised to take

English (Literature and Composition)

Mathematics (at least two papers, of which one should be Trigonometry)

Physics

Chemistry

an optional subject.

* Students from High Schools of Commerce may offer Grade XIII standing in Mathematics of Investment in place of Algebra as part of the requirement in Mathematics.

Admission: Equivalent Examination

ADMISSION OF EX-SERVICE MEN AND WOMEN

Ex-service men and women applying for admission to the Faculty of Arts are required to offer Matriculation standing as approved by the National Conference of Canadian Universities in June, 1944, as follows:

Grade XII English

French or another language

Mathematics (Algebra and Geometry)

One of History; a language not already chosen selected from Latin, Greek, French, German, Spanish or Italian; a science (Physics or Chemistry or Agriculture).

If, in addition, they can offer subjects at *Grade XIII* level, they are granted standing up to a total of five. Ex-service men and women entering with as many as four subjects of Grade XIII are admitted to the second year without condition.

Queen's University works in close co-operation with the Kingston Branch of the Department of Veterans Affairs and facilitates where possible all matters pertaining to the training provisions as set out in Post Discharge Re-establishment Order, P.C. 5210.

Admission by Equivalent Examination

Examinations Equivalent to the Ontario Secondary School Graduation Diploma

The following certificates recognized as equivalent to the Ontario Secondary School Graduation Diploma may be accepted in so far as they meet the admission requirements of Queen's University:

Alberta Junior Matriculation (Grade XI)

Quebec Quebec High School Leaving, or McGill Junior Matriculation

Manitoba Grade XI

Nova Scotia Grade XI (average 60, minimum 50)

Saskatchewan Grade XI

Newfoundland Grade XI

New Brunswick Junior Matriculation

British Columbia Junior Matriculation (Grade XII)

Prince Edward Island First Class License or Second Year Certificate from Prince of Wales College

Examinations Equivalent to Grade XIII

The following certificates are recognized as equivalent to the Ontario Grade XIII certificate in the subjects in which at least fifty per cent has been made in each paper:

Quebec	McGill Senior Matriculation, or Senior High School Leaving Certificate
Alberta	Senior Matriculation (Grade XII)
Manitoba	Grade XII
Nova Scotia	Grade XII
Saskatchewan	Grade XII
New Brunswick	Senior Matriculation
British Columbia	Senior Matriculation (Grade XIII)
Prince Edward Island	Honour Diploma of Third Year, Prince of Wales College
Great Britain	The General Certificate of the various English Universities and the Welsh Joint Education Committee with passes in at least five subjects of which two must be at the advanced level.

Admission to Advanced Standing

Students applying for admission to advanced standing with allowance on credits at another university must have an official certificate of standing with a statement of honourable dismissal forwarded to the Registrar for consideration. They are given equivalent standing but must comply with all regulations of Queen's University governing the Course they wish to complete.

No credits obtained at another institution are accepted for any of the last five classes offered by a candidate for a degree at Queen's University.

Admission by Special Regulation

Unmatriculated students who present certificates showing that they are over the age of twenty-one years may be admitted conditioned in the subjects of matriculation if they satisfy the Board of Studies that they can undertake university work with profit.

Candidates admitted under this regulation may remove entrance conditions by passing course one of the subject in which they lack matriculation; they may remove conditions in languages by passing a preparatory course in the language concerned, *e.g.*, GERMAN A, SPANISH A. They should note that a course used to remove an entrance condition may not be counted as a credit towards a degree.

Extramural Instruction

All inquiries regarding regulations should be addressed to the Registrar.

In order to meet the needs of students who are unable to do all their work in residence, of teachers in actual service who wish to improve their professional qualifications in certain subjects, and of those who, though unable to attend the regular classes, are yet desirous of studying under competent direction, the University conducts a system of extramural instruction. This work is as nearly as possible identical with that taken up by the intramural students and the same examinations are set for all. Candidates who fulfil the requirements of residence and otherwise comply with the conditions stated below may qualify for the various degrees to which their courses lead.

For details of the work offered for the summer of 1953 and winter 1953-4 see page 42.

Conditions of Admission

1. Extramural students are of two types—special and regular.

(a) Special students are those who do not wish to proceed towards a degree. They may register for any courses in which they are particularly interested but must conform to regulations regarding date of registration, fees and regularity of work. Special students are subject to all the regulations affecting regular students. (b) Regular students are those who are proceeding to a degree.

2. As in the case of intramural students, the requirement for admission to the Courses of study leading to a degree of Bachelor of Arts is (a) The Secondary School Graduation Diploma including English, a second language, History, Mathematics and two options; and (b) Grade XIII standing in English, Latin (two papers) or Mathematics (at least two papers) and two or three other subjects. Students entering with as few as four subjects, that is, English, Latin or Mathematics and two others, are required to have not lower than third class Honours standing in at least three of these subjects and are conditioned in the subject in which they lack standing. This condition may be removed by writing off the Grade

XIII paper or papers in the subject concerned, or by taking an extra course at the University.

3. Unmatriculated students who present certificates showing that they are over the age of twenty-one years may be admitted conditioned in the subjects of Matriculation if they satisfy the Board of Studies that they can profitably undertake university work. Candidates admitted under this regulation may remove entrance conditions by passing course 1 of the subject in which they lack Matriculation, or by completing Grade XIII standing in the subject concerned. They may remove conditions in language by passing a preparatory course in the language concerned, *e.g.*, GERMAN A, SPANISH A. They should note that an "A" course used to remove an entrance condition may not be counted towards a degree.

4. Candidates holding the Interim First Class Teaching Certificate may register extramurally on academic courses leading to the Permanent Certificate even though they do not offer the full Matriculation requirement for admission to the Faculty of Arts. If such candidates wish to proceed to a degree in Arts they must remove entrance conditions as indicated above.

5. Intramural students may become extramural students only by special permission of the Faculty.

6. There are two sessions in the year for extramural students. The winter session begins in September and ends with the April examinations; the summer session begins in April and ends with the August examinations. The Summer School forms part of the summer session though it is possible to work extramurally in certain courses throughout the summer without attending the Summer School.

7. (a) Extramural students may not register for more than four courses in the academic year. They may register in the winter (September-April) for as many as two courses or four half-courses, and in the summer (April-August)* for two courses or three half-courses. (b) The courses selected in each year are subject to the approval of the Board of Studies and, in the case of candidates for degrees, must conform to the regulations for concentration, distribution, and sequence of work. (c) Before registering, students should consult the time-table of lectures, as they may not register for either winter or summer work in two courses which meet at the same hour. The summer time-table is given in the Announcement of Summer School and Extramural Work.

* The Calendar is issued in the spring but is not in force until the following autumn. The work of advanced whole courses given at the Summer School is based on the prescriptions in the calendar for the next session, since these courses are completed during the following winter.

Extramural: Admission, Fees

8. (a) Extramural students should register two or three weeks before the session opens so that they may receive the preliminary instructions and provide themselves with books in time to start work promptly. They are allowed to register up to 17 September for the winter or 10 April for the summer at the regular fee and up to 24 September or 17 April on payment of an extra fee of \$5. Only in exceptional circumstances and by special permission of the Faculty is registration accepted after these dates. (b) Extramural students may not receive the examination returns before the last date of registration but they should send fees to the Registrar within the required dates, stating the courses in which they wish to register if successful in their examinations. Necessary changes may be made later.

9. No one is permitted to register at Queen's University in the same session that he is taking work from another educational institution, or writing on any examinations other than those leading to the Honour Graduation Diploma. No credits obtained at another institution are accepted for any of the last five courses offered by a candidate for a degree at Queen's University.

Fees

10. The fees payable upon application for registration are:

Extramural and Summer School Fee

(a) This is a single inclusive fee covering registration by the specified date, use of the library, tuition whether given extramurally or in the Summer School or partly each way, and the first examination (not a supplemental) if taken within two years. For a student in the Summer School the fee also includes some athletic, and Union and Medical Fees.

\$40 for each whole course taken by correspondence or by
correspondence and at the Summer School

\$20 for each half course

\$45 for each two-hour class taken at the Summer School

\$ 6 Student Interests Fee for those at the Summer School

Fee for Pro Tanto Allowance

(b) Students wishing to have courses credited towards a degree on work done at other academic institutions, must pay a fee of \$10 for *pro tanto* allowance at the time of their first registration. Fees may be paid in two equal instalments, in which case an additional \$1 is added to the first instalment. Students registering in September must pay the first instalment by 17 September, the balance on or before 1 December. Students registering in April must pay the first instalment by 10 April, the balance on or before 3 July.

11. Extramural students who enter as intramural students during the

Extramural Classes

winter session will have their extramural fees applied on intramural charges. (See Regulation 16 below.)

12. In special circumstances, refunds may be made. Application for a refund must be filed within twelve months of registration. Deductions will be charged for exercises which have been submitted and graded, in addition to an administrative fee of \$5.

Residence Requirements

13. The University does not undertake to make it possible for a student to get a degree by satisfying merely the minimum residence requirements given below, since in some subjects only a limited amount of instruction can be given extramurally or in the Summer School. In the sciences, for example, all the laboratory work must be done at the University and a student specializing in science may find it necessary to spend two or three years in residence.

Candidates for degree must attend one winter session and two summer schools, or four summer schools and complete within that period not fewer than seven courses. Candidates who complete two classes in an approved tutorial group directed by a University instructor may have the residence requirements reduced by one summer school.

Conduct of Extramural Classes

see also Regulation 26 below

14. The method of giving extramural instruction necessarily varies with the subject. Detailed information is contained in the instruction sheets provided from time to time. These specify the prescribed reading, assign exercises and essays to be written, and in some cases give the substance of intramural lectures. The first instalment of work is sent to students as soon as they register. The date of each essay or exercise coming in, and of **each criticism** or fresh piece of work going out, is recorded at the office of the Department of University Extension. Each essay or exercise is examined and returned to the writer with criticism and suggestions. Students should address their work and all inquiries regarding their work to the DEPARTMENT OF UNIVERSITY EXTENSION, Queen's University, Kingston, Ontario.

REGULARITY OF WORK

15. All exercises must be sent in by the dates specified or they will be returned unmarked and without credit.

TRANSFER FROM EXTRAMURAL TO INTRAMURAL CLASSES

16. Extramural students may become intramural students during the

Extramural Examinations

winter session in those courses in which they have satisfactorily completed the work prescribed up to the date of transferring. Fees already paid may be applied on intramural charges.

17. Students who transfer to intramural work before January may add enough half-courses to give them five courses in the second term if such half-courses are available and the prerequisite work has been done.

TEXT-BOOKS

18. Text-books may be obtained from the TECHNICAL SUPPLIES STORE, Queen's University Grounds.

LIBRARY FACILITIES FOR EXTRAMURAL STUDENTS

19. Extramural students are expected to buy all text-books prescribed. They should also make generous provision for the purchase of other books bearing on their work, since the library cannot undertake to provide enough duplicates to serve all the needs of students not in residence.

20. Three books may be borrowed at one time, provided that no two relate to the same piece of work. Unless a special arrangement is made, a book may be kept for only two weeks from the date on which it is received.

21. No fee is charged for the use of the library, but extramural students must send to the Librarian a deposit of \$2 for the use of one book, \$4 for two books, and \$5 for three, as insurance against loss. Books may be exchanged as often as the borrower wishes; and when all are returned the deposit will be repaid on request.

22. All communications concerning books and deposits must be addressed to THE LIBRARIAN, Queen's University, Kingston, Ontario.

Examinations

Intramural and extramural examinations are the same in all subjects and are held at the same time. It is impossible to modify the examination schedule to suit the personal convenience of students.

23. Examinations are held in January, April, and August as follows:

(a) Examinations in half-courses of the first term are held in January (see page ix).

(b) Examinations in all whole courses and in half-courses of the second term are held in April. Examinations in Pass courses (numbered under 10) and in such Honours courses as may be offered in the summer, may be postponed until the autumn, but postponement lessens the amount of new work which may be completed in August.

Extramural Examinations

(c) Ordinarily an extramural student may not write in August on more than two courses or three half-courses. He may, however, write on three courses, if examinations in one or more have been postponed from April.

24. *Application.* Application for examinations in the particular courses on which a student proposes to write, accompanied by the proper fees, must reach the office of the Department of University Extension by 1 December for January examinations, by 10 February for the April examinations, and by 10 July for the August examinations. The fees for supplemental examinations are \$3 for each half-course examination and \$6 for each whole course examination, with an additional charge of \$3 for late application if accepted.

25. Candidates are charged a fine of \$2 if they fail to notify the Registrar at least ten days before the beginning of the examinations, that they do not intend to write on a subject for which they have applied.

26. *Eligibility.* Only those who have fulfilled requirements of registration and regularity of work will be admitted to examinations. No one is eligible who has done less than seven-eighths of the prescribed work. Those who do not fulfil this requirement in any course must register again, pay the fees and repeat the exercises.

27. *Failures and Supplementals.* Students who fail in an examination may write a supplemental examination at the next regular examination period, provided an examination is held in the subject concerned. This privilege applies to all Pass courses and to the first courses in Honours. Supplemental examinations may not be postponed beyond the period specified above.

28. *Re-writing for higher standing.* Students who have passed the examination in a course may rewrite for higher standing. This privilege is extended to the third examination period after the first time of writing.

29. *Postponement of examinations.* Students who have qualified for examination may postpone writing for two years from the date of the first registration in the course concerned. Those who elect to postpone examinations do so at their own risk. Courses may be discontinued or changed and special papers cannot be set. Those who postpone writing beyond the specified limit must repeat the tutorial work of the course.

30. *Oral and practical tests,* prescribed by modern language and science departments, must be taken at the University. In modern languages these tests are held at the end of March or at the close of the Summer School.

Extramural and Summer School Courses

31. *Local centres for extramural examinations* have been established in most of the larger cities and towns throughout Canada and a list of such centres is sent to all extramural students a month in advance of the examinations. Consideration is given to an application to establish a new centre. The application accompanied by the special fee of \$10, must be made by 1 December for January examinations, by 10 February for April examinations, and by 10 July for August examinations.

DETERMINATION OF STANDING

32. See page 81, GENERAL REGULATIONS, sections 24 and 25.

Extramural and Summer School Work

The two following tables show the courses offered through extramural and Summer School instruction in the summer of 1953 and the winter of 1953-4 and the cycle of courses for the next five years. Offerings are planned so that students' degree programmes may be completed in the normal time. In each Calendar there appears a cycle of courses for five years in advance. Students should plan their extramural and Summer School work in accordance with this cycle. So far as possible courses listed in the cycle will be given as advertised.

Extramural Courses 1953-4

Summer Extramural*		Winter Extramural
1,2*	LATIN	1,2
A,1,2	GREEK	A,1,2
4	ANCIENT HISTORY	4
1	CLASSICAL LITERATURE	1
1,2*	ENGLISH	1,2,14A,14B,20
1,2*	FRENCH	1,2
A,1,2	GERMAN	A,1,2,10
3,6	SPANISH	A,1,2,6,10
A*,1*,2,6	HISTORY	3,6
4*	ECONOMICS	4
2	POLITICS	2
63	COMMERCE	63
1,5*	PHILOSOPHY	1
2*,4,6,8*	PSYCHOLOGY	2,4,6,8
1,2*,3A*,3B*,7A*	MATHEMATICS	1,2,3A,7B,10A,11B

* Courses offered at the Summer School as well as by correspondence are marked with an asterisk. See also the table of Summer School Courses on page 43 following.

Summer School Courses 1953-7

	1953	1954	1955	1956	1957
ART	3	1	2	3	1
ASTRONOMY	1	—	1	—	1
BIOLOGY	1,10	1,16	1,10	1,16	1,10
CHEMISTRY	2	1	2	1	2
DRAMA	1*	1*	1*	1*	1*
ECONOMICS	4*	—	—	4*	—
ENGLISH	2*,5,19*	2*,7,15	2*,3,20	2*,5,10*	2*,3,19*
FRENCH	2,10*	2,3	2,10*	2,3	2,10*
GEOLOGY	1	1	1	1	1
GEOGRAPHY	1	1	1	1	1
HISTORY	5,16*	3,13*	6,16*	3,13*	5,16*
LATIN	2	—	—	—	—
MATHEMATICS	2*,3A,3B,7A	2*,10A,11B	2*	2*,10A,11B	2*
MUSIC	—	3*	1*	3*	3*
PHILOSOPHY	5*	1*	1*	1*	5*
POLITICS	—	2*	—	—	2*
PSYCHOLOGY	2,8,3	2,6	2,4	2,8	2,6
RELIGIOUS KNOWLEDGE	3	—	2	—	4
SOCIOLOGY	—	—	1*	—	—
SPANISH	A,1	A,2	A,6	A,1	A,2

The Summer School

The forty-fourth session of the Summer School begins at 8 a.m. on Friday, 3 July, and closes on Friday, 14 August. Students are expected to register on Thursday, 2 July. An extra fee of \$3 will be charged those registering after this date.

Courses are given in Art, Biology, Chemistry, Drama, Economics, English, French, Geography, Geology, History, Latin, Mathematics, Philosophy, Psychology, Religious Knowledge, and Spanish. Libraries and laboratories are available for use as in the winter session.

Ban Righ Hall, the women's residence, is open during the summer and accommodates two hundred and seventy-five students. Applications for rooms should be sent as early as possible to the DEAN OF WOMEN.

PURPOSE OF THE SUMMER SCHOOL

The Summer School offers the advantages of university study to those who cannot attend the classes of the regular session.

*Courses given two hours a day in Summer School without preliminary exercises.

Summer School

It gives the teachers an opportunity to improve their scholarship in chosen lines of study, to observe methods of teaching, and to become acquainted with books and equipment not otherwise available.

It gives intramural students who have lost standing through illness or other causes an opportunity of qualifying for the August supplemental examinations. Moreover, intramural students in their first or second years, who on account of ill health are unable to carry the required five courses, may, with the consent of the Board of Studies, take three or four courses in the winter and the rest extramurally in the summer, provided that they attend Summer School.

It gives extramural students an opportunity to take the oral work required in the modern languages, to do in the laboratories the practical work required in the courses in science, and to satisfy the minimum requirements for the degree of Bachelor of Arts. (See page 39, section 13).

ADMISSION

No examination is required for admission to the Summer School. The classes are open to all who desire to improve their scholarship or professional equipment. Candidates for a degree, however, must satisfy matriculation requirements before being admitted to the university work and examinations, and must register for summer work in April. Furthermore, they must submit in May and June at least seven-eighths of the exercises and all the essays in those classes which require such work. No student working for credit is allowed to register for more than two courses or three half-courses in the Summer School.

EXAMINATIONS

No examinations are held in connection with the Summer School. Students desiring credit for their work should write at the regular University examinations in August. See sections 15, 23, 26, pages 39, 40, 41.

FEES

See page 38 above.

FURTHER INFORMATION

The announcement of the Summer School, containing full details concerning the work offered is published each year in March, and is supplied on application. All inquiries concerning the Summer School should be addressed to the DEPARTMENT OF UNIVERSITY EXTENSION, Queen's University, Kingston, Ontario.

Fees

The Board of Trustees reserves the right to make changes without notice in the published scale of fees if, in their opinion, circumstances so require.

Students who enter with Grade XIII (Senior Matriculation) standing or its equivalent and proceed to the Honours degree, shall pay in aggregate not less than the full sessional fees for four years. Students on the three-year General Course who enter with the above standing shall pay in aggregate not less than the full sessional fees for the three years.

Fees must be remitted by accepted cheque, postal order, or bank draft payable to Queen's University. Cheques or bank drafts on any point where there is a branch of the Bank of Montreal are received at par; all other cheques should have 1/8 of 1 per cent, minimum 15c, added to cover exchange, or should be drawn *plus* exchange.

Fees for the session are payable on or before 1 September. The receipted fee sheet is the admission card to the Registration Hall.

Sessional Fee—including Registration, Tuition, Library, Examinations.

Faculty of Arts—all years \$230.00

School of Commerce—first and second years \$230.00

third and fourth years \$250.00

Combined Course in Arts and Physical and Health Education—

first, second and third years \$265.00

final year \$275.00

Fee for Student Interests—including Health Insurance, Union,

Faculty Societies, Alma Mater Society, Journal and Ath-

letics (the athletic fee which is part of the student interests

gives admission to all home games except playoffs) 43.50

The fees may be paid in two instalments, in which case an extra charge of \$5 is added to the first instalment which is payable on or before 1 September. The second instalment must be paid within the first week after the opening of the second term in January.

Fees

Late Payment of Fees. Students who fail to pay the prescribed fees by 1 September are charged an additional fee of \$1 per day up until the day on which payment is completed.

Late Registration. Students presenting themselves after the day set aside for their registration will pay in addition to the regular fees, \$5 for the first day and \$3 a day thereafter up until the day they register.

Refund of Fees. If, after paying the fees a student finds it impossible to attend the University, a full refund is made. Students withdrawing within two weeks after the opening of the session are refunded the tuition fee paid less an administrative charge of \$5. Students withdrawing after that time are charged one-seventh of the total tuition for each month of attendance. Students withdrawing at the beginning of a month or at any time within a month are charged for the whole month.

No refund is made on the Student Interests fee to a student who attends any part of the session.

Year Fees. A Year fee, ordinarily not more than \$2, is collected by the year societies shortly after the opening of the session.

Candidates for the degree of Master of Arts must pay

Tuition Fee	\$200.00
Student Interests Fee	14.25

If the work for the Master's Course is spread over two years, the student pays each year a total sessional fee of \$119.25.

These fees are payable as they are incurred.

Laboratory Fee

For each course in science except Chemistry	\$ 5
For each course in Chemistry	10
Maximum charge for courses in science	20

Special Charges

Fee for <i>pro tanto</i> allowance	10
Late registration (see also pages viii, ix), minimum	5
Late application for examination or graduation	3
Change of Course after registration	2
Special examinations given at the University	
one examination	5
two or more examinations	10
Examinations at outside centres: each whole	
course	6
each half course	3

Special students not paying full fees. Each course 50
(Student interests and Laboratory fees as above)

Graduation

Bachelor of Arts	10
Bachelor of Commerce	10
Bachelor of Nursing Science	10
Bachelor of Physical and Health Education	10
Master of Arts	20
Master of Commerce	20
Doctor of Philosophy	50
Degree <i>in absentia</i> , extra fee	10

Extramural and Summer School Fee

An inclusive fee covering Registration, Tutorial work, Summer School, Examinations (except supplementals), Library, the MacClement Scholarship contribution and membership in the Summer School Association.

Each whole course taken extramurally or by extramural and Summer School work	\$40
Each half course	20
Each two-hour class taken at the Summer School	45

Special Charges

Fee for <i>pro tanto</i> allowance	10
Laboratory fee for Physics, Chemistry, Biology	3
Laboratory fee for Geology or Geography	5
Late registration	5
Late application for examination or supplementals	3
Change of work after registration	2
Registration fee (payable only by non-registered students applying for examinations in courses already passed)	10
Supplemental examinations: each whole course	6
each half course	3

Graduation: see p 46 above

Fees may be paid in two equal instalments, in which case an additional \$1 is added to the first instalment. Students registering in September must pay the first instalment by 17 September, the balance on or before 1 December. Students registering in April must pay the first instalment by 10 April, the balance on or before 2 July.

Scholarships, Prizes and Medals

MATRICULATION SCHOLARSHIPS

For a list of Matriculation Scholarships and the conditions of award see the publication entitled *Scholarships and Prizes*.

SCHOLARSHIPS IN THE FACULTY OF ARTS

Scholarship awards are governed by the following regulations:

1. Scholarships may be held only by students in attendance in the Faculty of Arts in the year following the award.
2. Scholarships are not ordinarily awarded to students who make lower than first class standing.
3. A student may not hold more than \$400 in Faculty scholarship money in any one year.
4. In any year in which a scholarship cannot be given under the normal terms of award, the Department concerned may make special recommendation to the Faculty.

Language and Literature

CLASSICS

Frederica McCulloch Scholarships in Latin. Founded by the late ANDREW McCULLOCH, M.A., of Thorold.

1. Value \$60. Awarded to the student who has the highest standing on the April examination in LATIN 1.
2. Value \$80. Awarded to the student who has the highest standing on the April examination in LATIN 2.
3. Value \$60. Awarded to the student who has the second highest standing on the April examination in Latin 2.
4. Value \$120. Normally awarded at the end of the first year of Honours on the standing obtained thus far in Latin courses taken at the University. *

5. Value \$80. Normally awarded at the end of the first year of Honours on the standing obtained thus far in Latin courses taken at the University.*

W. W. Near Scholarships in Classics. Founded by the late W. W. NEAR, Esq., of Toronto.

1. Value \$100. Normally awarded at the end of the second year of Honours, chiefly on the standing obtained in courses of the Department of Classics. When candidates are of nearly equal merit, some preference will be given those who are taking Greek.*

2. Value \$50. Awarded to the student who has the highest standing on the April examination in HISTORY 4.

3. Value \$50. Awarded to the student who has the highest standing on the April examination in CLASSICAL LITERATURE 1.

Scholarships in Greek. The *MacLennan Scholarship*. Founded by the late Hon. JAMES MACLENNAN, LL.D., of Toronto; value \$20.

The *Flossie May Bogart Scholarship*. Founded by the late Mrs. I. G. BOGART of Kingston in honour of FLOSSIE MAY BOGART; value \$80.

These awards are made to students of outstanding ability and promise in GREEK A or GREEK 1 or GREEK 2. When GREEK A and GREEK 1 are taken in the winter and the following summer they will (for purposes of these awards) be considered as together forming one course. It will therefore sometimes be necessary to withhold announcement of these scholarships until the results of August examinations are known.

ENGLISH

Alexander Laird Scholarship in ENGLISH 1. Founded in memory of the late Rev. ALEXANDER LAIRD by his brothers and sisters. Awarded annually to the student who makes the highest marks in ENGLISH 1; value \$50.

The James Cappon Memorial Scholarship in ENGLISH 2. Founded by Miss ALICE L. MACNEE of Kingston in memory of Dr JAMES CAPPON, formerly Head of the Department of English and Dean of the Faculty of Arts.

* These scholarships are intended to recognize outstanding promise in Honours work. If conditions warrant, they may be awarded at other stages than those prescribed here.

Value \$40. Awarded to the student making the highest standing in ENGLISH 2, provided that the student proceeds to further work in English the following year.

Special Scholarship for Highest Standing in Extramural ENGLISH 2.

Value \$25. Given by a graduate to the extramural candidate for degree who makes the highest standing in ENGLISH 2, provided that the

candidate proceeds with university work the following year. This scholarship is paid in two equal instalments on or about 15 October and 15 March.

Roberta McCulloch Scholarships in English. Founded by the late ANDREW MCCULLOCH, M.A., of Thorold.

1. Value \$30. Awarded annually to the student standing second in ENGLISH 2 (intramural).

2. Value \$50. Awarded annually to the student standing highest in Grade A, ENGLISH 3.

3. Value \$50. Awarded annually to the student standing highest in Grade A, ENGLISH 7.

4. Value \$40. Awarded to the student having the highest standing in ENGLISH 10.

5. Value \$100. Awarded annually to the Honours student who having English as the major subject, stands highest in Grade A, in the final year examinations, provided that the student is proceeding to graduate work in Queen's University or another university.

McIver Scholarships. Founded by J. B. McIVER, formerly Treasurer of Queen's University.

1. Value \$50. Awarded to the student having the highest standing in ENGLISH 5 who plans to proceed to further work in English.

2. Value \$50. Awarded to the student having the highest standing in ENGLISH 14.

3. Value \$50. Awarded to the student having the highest standing in ENGLISH 15.

4. Value \$50. Awarded to the student having the highest standing in ENGLISH 19.

Mary Mewkill Memorial Scholarship in English. Given by Miss MARY MEWKILL of Poughkeepsie, New York, in grateful remembrance of her teachers and associates at Queen's University.

Value \$50. Awarded annually to the most outstanding student in the course in English covering the period from 1790 to 1830, taught for many years by Professor JAMES A. ROY.

The '01 Fellowship in English. Established by the class which graduated in 1901.

Value \$80. Awarded to a student who will act as tutor in English during the following session.

McIlquham Foundation in English. Founded by the parents of Mr J. MAX McILQUHAM, a student at Queen's University, 1912-15, who was killed on service overseas.

Scholarships: Arts

Value \$20. Awarded for the best original poem, short story, or play.

Competitive papers must be submitted to the Registrar by 1 April. Each paper must bear a motto instead of the author's name, and must have attached to it a sealed envelope, bearing the same motto and containing a signed declaration that it is his unaided composition. All successful compositions are the property of the University, and are at the disposal of the Senate.

Wilhelmina Gordon Foundation in English. Established by the Imperial Order, Daughters of the Empire, in appreciation of the work of Professor WILHELMINA GORDON, who served as National Educational Secretary from 1923 to 1937.

Value \$50. Awarded to the Honours student in English standing highest in Class I in the final year examinations, provided that the student is proceeding to graduate work.

FRENCH

W. W. Near Scholarship in French. Founded by the late W. W. NEAR, Esq., of Toronto.

1. Value \$100. Awarded to the student who has the highest standing in FRENCH 2.

2. Value \$100. Awarded to the student making the highest standing in the first year of Honours work.

The Ottawa B'nai B'rith Scholarship in French.

Value \$100. Awarded to the student making the highest standing in the second year of Honours work in French.

Sir Wilfrid Laurier Memorial Scholarship. Founded by the Ontario Women's Liberal Association to perpetuate the memory of Sir WILFRID LAURIER.

Value \$80. Awarded for proficiency in French conversation. Candidates must be Canadian-born English-speaking students, sons or daughters of a British subject by birth or naturalization, not of French parentage and resident in Ontario. The examination is held in March of each year.

See also the *Edgar Forrester Scholarship in Oral French*, page 77.

GERMAN

In any year in which one or more of these scholarships cannot be awarded under the following conditions, the Department may make a special recommendation to the Faculty.

W. W. Near Scholarship in German. Founded by the late W. W. NEAR, Esq., of Toronto.

Scholarships: Arts

1. Value \$50. Awarded to the student who obtains the highest standing in GERMAN 2.

2. Value \$50. Awarded to the student who obtains the highest standing in GERMAN 10.

Susan Near Scholarship in German. Founded by the late SUSAN NEAR of Toronto.

Value \$50. Awarded to the student who obtains the highest standing in any full course, or two half-courses, in Honours German other than GERMAN 10.

The German Student Exchange Scholarship

An exchange between the Universities of the Federal Republic of Germany and Queen's University is arranged each year. Under this arrangement a student from Germany is given free tuition and health insurance and a grant of \$600, for the session at Queen's University. In return a student from Queen's University receives a Scholarship of approximately \$750 payable in twelve monthly instalments if it is awarded by the Academic Exchange Bureau in Bonn, Germany; approximately \$600 if awarded by a German University. In a majority of cases the student is not required to pay tuition fees.

Full information about the exchange plan may be obtained from the Head of the Department of German. Application should be made to the Department of German by February 15.

HEBREW

The Harry Abramsky Scholarship in Hebrew.

Value \$50. Awarded annually to the student who obtains the highest standing in HEBREW 1.

Mary Fraser McLennan Prize in Hebrew. Founded in memory of MARY FRASER McLENNAN, of Lancaster, by her sons.

Value \$12. Awarded to the student obtaining the highest standing in HEBREW 2.

SPANISH

W. W. Near Scholarships in Spanish. Founded by the late W. W. NEAR, Esq., of Toronto.

1. Value \$50. Awarded to the student who has the highest standing in SPANISH 1.

2. Value \$50. Awarded to the student who has the highest standing in SPANISH 6 or SPANISH 10.

Susan Near Scholarship in Spanish. Founded by the late SUSAN NEAR of Toronto.

Scholarships: History & Social Science

Value \$50. Awarded to the student who has the highest standing in SPANISH 2 provided that that standing is Grade A.

History and Social Science

HISTORY

Andrew Haydon Scholarship in Colonial History. Founded by Senator ANDREW HAYDON, M.A. '93, LL.B.

Value \$40. Awarded to the student with the highest standing in the Pass class in HISTORY 3.

Susan Near Scholarships in History. Founded by the late SUSAN NEAR of Toronto.

Two scholarships of the value of \$80 and \$70 respectively. Awarded to the students who, offering History as their major subject, obtain the highest and second highest standing in History at the end of the first session after admission to Honours.

Arts '09 Scholarship in History. Founded by the class of 1909.

Present value \$75. Awarded annually to the Honours student in History with the highest standing in History courses taken in the penultimate year.

Thomas M. Walsh, M.A., Memorial Prize in History. Established by W. G. McNEIL, B.A. '13, and J. F. C. WHALLEY, B.A. '13, in memory of their classmate, THOMAS M. WALSH, M.A. '13.

Value \$10. Awarded annually to the student who has the highest standing in the penultimate year of the Honours Course in History. In determining the award essays that have been prescribed during the session will be taken into account.

PHILOSOPHY AND PSYCHOLOGY

Susan Near Scholarship in Psychology. Founded by the late SUSAN NEAR of Toronto.

Value \$100. Awarded to the student taking the highest standing in PSYCHOLOGY 2.

Isaac Cohen Scholarship in Philosophy.

Value \$100. This scholarship is awarded annually to a student in Philosophy on the results of the year's work in PHILOSOPHY 1.

POLITICAL AND ECONOMIC SCIENCE

W. M. O. Lochead Scholarship in Economics. Founded by W. M. O. LOCHEAD, M.A. '98, Kitchener, Ontario.

Scholarships: History & Social Science

Value \$40. The scholarship will be awarded to the student taking the highest standing in the sessional examinations and classwork in ECONOMICS 4, provided he is in attendance in some faculty of the University during the following session.

Adam Shortt Scholarship in Political Science. Founded by G. W. MASON, Esq., K.C., in honour of Dr ADAM SHORTT, formerly Professor of Economics.

Value \$40. Awarded to the student taking the highest standing in POLITICS 2, provided he is in attendance during the following session and is registered in advanced work in the Department of Political and Economic Science.

Chancellor C. A. Dunning Scholarship in Political and Economic Science and Commerce.

Value \$300. Awarded by recommendation of the Department on the basis of the first year's work in Honours (i.e., the first year after admission to Honours) to a candidate for Honours (major) in Economics or Politics, or at the end of the second year's work to candidates for the degree of Bachelor of Commerce. The holder of this scholarship is paid \$150 in each of two succeeding years. The second payment may be withheld, on the recommendation of the Department, if the holder's progress is not satisfactory.

W. W. Near Scholarship in Political and Economic Science. Founded by the late W. W. NEAR, Esq., of Toronto.

Value \$200. Awarded by recommendation of the Department on the basis of the first year's work in Honours (i.e., the first year after admission to Honours) to a candidate for Honours (major) in Economics or Politics. The holder of the scholarship is paid \$100 in each of two succeeding years. The second payment may be withheld, on the recommendation of the Department, if the holder's progress is not satisfactory.

George and Mary Louise Patton Memorial Scholarship. Founded by the late GEORGE PATTON in memory of his wife MARY LOUISE PATTON, and himself.

Value \$80. Awarded by recommendation of the Department of Political and Economic Science on the basis of the first year's work in Honours, (i.e., the first year after admission to Honours), to the candidate for Honours in Economics or Politics who makes the second highest standing.

Gowan Foundation No I. Founded by the late Sir JAMES R. GOWAN, K.C.M.G.

Value \$20. Awarded for the best essay written under examination conditions in February of each year, on one of a list of subjects prescribed

Scholarships: History & Social Science

by the Department of Political and Economic Science.

Gowan Foundation No. III. Founded by the late Sir JAMES R. GOWAN, K.C.M.G.

Value \$20 in books. Awarded in Honours in Political Science.

Harry Abramsky Scholarship. Given by HARRY ABRAMSKY, Kingston, Ontario.

Value \$50. Awarded to a final year student in the School of Commerce and Administration on the basis of standing on the previous year's work.

The Clarkson Prize in Accounting. The gift of CLARKSON, GORDON & COMPANY.

Value \$50. Awarded on the recommendation of the staff of the School of Commerce and Administration to the graduating student who has taken the optional courses in the accounting field and whose work on these courses and on the compulsory courses in the same field has been outstanding.

Arthur Hillmer Memorial Prize. Established and maintained by CAMERON C. HILLMER, Commerce '36, Oakville, Ontario.

A prize of the value of approximately \$10 in books. Awarded annually at the Spring Convocation to the final year student who, in the opinion of the Commerce staff, has done the best work in COMMERCE 52.

C. F. J. Finlay Memorial Prize. Established and maintained by CAMERON C. HILLMER, Commerce '36, Oakville, Ontario.

A prize of the value of approximately \$10 in books. Awarded annually at the Spring Convocation to the final year student who, in the opinion of the Commerce staff, has done the best work in COMMERCE 54.

Sir James Dunn Scholarship in Commerce.

Value \$1000. To be awarded on the recommendation of the Director of the School of Commerce and Administration and the Head of the Department of Political and Economic Science to a student in the School of Commerce who is qualified to enter the second year of the Course on the basis of his academic standing and aptitude for a business career. The student must maintain satisfactory standing from year to year in order to retain the scholarship. In the event of a student not doing satisfactory work, the Scholarship may revert to another student. Payable in the second year of course, \$400; in the third year, \$300; in the fourth year, \$300.

Edwin Waterhouse Scholarship. Founded by PRICE, WATERHOUSE AND COMPANY.

Value \$250. Awarded to a student in the Course in Commerce and Administration who has completed the work of the third year, is within

Scholarships: Mathematics & Science

one year of graduation, has gained distinction in his academic work and is deserving of financial assistance. The award is conditional on the winner taking the optional accounting courses of the final year. If he fails to register for these courses at the beginning of the session following the award, the next most deserving candidate who satisfies all the conditions is given the scholarship. The recipient is selected on the recommendation of a Committee of Award consisting of the PRINCIPAL of the University, the DIRECTOR OF THE SCHOOL OF COMMERCE AND ADMINISTRATION, and the REGISTRAR.

Industrial Relations Prize No. 1.

Value \$25. A prize of the value of \$25 to be awarded each year to the student making the highest standing in COMMERCE 50.

Mathematics and Science

MATHEMATICS AND PHYSICS

N. F. Dupuis Scholarship in Mathematics. This is one of three scholarships founded by the graduates of the University in honour of the late Professor N. F. DUPUIS on the completion of his forty-five years' service as professor in the University.

Value \$50. The Scholarship is awarded to the student who takes the highest standing in MATHEMATICS 1 in the April examinations.

E. D. Merkley Prize in MATHEMATICS 2. Founded in memory of E. D. MERKLEY, B.A., a graduate of 1926.

A prize of the value of \$5 in books. Awarded each year to the student obtaining the highest standing in MATHEMATICS 2.

Susan Near Scholarships in Mathematics. Founded by the late SUSAN NEAR of Toronto.

Two scholarships of the value of \$60 and \$40. Awarded to the students with the highest and second highest standing in MATHEMATICS 2, 10A, 11B taken concurrently.

Two scholarships of the value of \$60 and \$40. Awarded to the students with the highest and second highest standing in MATHEMATICS 12A, 15B, and 13 taken concurrently.

William Coombs Baker Memorial Prize. This prize has been founded by graduates in memory of WILLIAM COOMBS BAKER, formerly the Robert Waddell Professor of Experimental Physics at Queen's University.

A prize of the value of about \$22 in books selected from a list approved by the Department of Physics. Awarded annually to the student

Scholarships: Mathematics & Science

making the highest standing in PHYSICS 11.

Arts '15 Scholarship. Founded as a memorial by the class of 1915. (The capital sum is not yet fully collected).

Present value \$26. Awarded annually in turn by the Departments of English, Mathematics and History to the student with the highest standing in two Honours courses taken in the third year. Awarded in Mathematics in 1954, in History in 1955, and in English in 1956.

Day Scholarship in Physics and Mathematics. Founded in memory of the late CALVIN WELLINGTON DAY, M.A., Lieutenant 2nd Battalion, C.E.F.

Value \$20. Awarded to students proceeding to the Honours Course in Physics and Mathematics, the award to be based on examinations in PHYSICS 2 and the Mathematics taken in the same year, provided that at least one full course in Mathematics other than MATHEMATICS 1 is being taken.

Susan Near Scholarships in Physics. Founded by the late SUSAN NEAR of Toronto.

1. Value \$50. Awarded to the student who has the highest standing in PHYSICS 2 and PHYSICS 11 at the end of the session in which PHYSICS 11 is completed. PHYSICS 2 need not be taken concurrently with PHYSICS 11.

2. Value \$75. Awarded to the student who has the highest standing in PHYSICS 14A and PHYSICS 13B taken concurrently.

3. Value \$75. Awarded to the student who has the highest standing in PHYSICS 10A and PHYSICS 12B taken concurrently.

The California Standard Company Scholarships.

The California Standard Company has established three Scholarships of \$375 each for award to outstanding students in the penultimate year of the Course in Geological Sciences, Geo-physics or related Physics, Mining, Metallurgy, Chemical Engineering, Civil Engineering, Mechanical Engineering. In making the award consideration will be given not only to scholarship, potential ability for research, character and personality but also to interest in problems related to the exploration for and production of oil.

BIOLOGY

W. T. MacClement Memorial Scholarship in Biology 1. Given by graduates in memory of WILLIAM THOMAS MACCLEMENT, formerly the John Roberts Allan Professor of Biology at Queen's University.

Value \$40. Awarded annually to the student making the highest standing in BIOLOGY 1.

Scholarships: Mathematics & Science

Ann Eliza Stafford Scholarship in Biology. Given by T. T. BOWER, M.B.E., of Winnipeg, Manitoba, in memory of his mother, ANN ELIZA STAFFORD (1847-1888) of Lyndhurst, Ontario.

Value \$30. Awarded annually to the student making the second highest standing in BIOLOGY 1.

W. W. Near Scholarship in Biology. Founded by the late W. W. NEAR, Esq., of Toronto.

Value \$200. Awarded by recommendation of the Department on the basis of the first year's work in Honours in the Department (i.e., the first year after admission to Honours) to a candidate for Honours (major) in Biology. The holder of this scholarship is paid \$100 in each of two succeeding years. The second payment may be withheld, on recommendation of the Department, if the holder's progress is not satisfactory.

Gowan Foundation No. II. Founded by the late Sir JAMES R. GOWAN, K.C.M.G.

Value \$16. Awarded for the best collection of Canadian Ferns and Fern Allies. In session 1953-4 only Canadian Ferns will be accepted. The plants must be good specimens, well pressed and mounted on herbarium sheets of the standard size. The collection must be delivered before 15 December.

CHEMISTRY

William Moffat Scholarship. Founded by Dr WILLIAM MOFFAT of Utica.

Value \$20. Awarded annually to the student making the highest standing in first year Chemistry.

Dr William H. Nichols Scholarship in Chemistry. Founded by Dr WILLIAM H. NICHOLS.

Value \$40. Awarded annually to the student obtaining the highest marks in CHEMISTRY 2.

Susan Near Scholarship in Chemistry. Founded by the late SUSAN NEAR of Toronto.

Two scholarships of the value of \$100 and \$50 to be awarded to the students with the highest and second highest standing in any two of CHEMISTRY 11, 12 and 13 taken concurrently, provided that the average obtained in each case on the two subjects is at least 75 per cent.

Solomon Lieff Prize in Physical Chemistry. Established in memory of the late SOLOMON LIEFF, Arts '46, by Mr and Mrs I. LIEFF and the B'nai B'rith Hillel Foundation of Queen's University.

Value \$10.47 in books. Awarded annually to the student making the highest standing in CHEMISTRY 14.

Scholarships: Mathematics & Science

Chemical Institute of Canada Scholarships. Given by the Chemical Institute of Canada.

Two scholarships of the value of \$25 each. One scholarship is awarded to the student in third year Chemical Engineering who obtains the highest standing on the work of the year and the other to the student either in third year Chemistry in the Faculty of Applied Science or in the penultimate year of the Honours Course in Chemistry in the Faculty of Arts, who obtains the highest standing on the work of his year.

The A. C. Neish Prizes. Established by the Kingston Section of the Chemical Institute of Canada as a memorial to Professor A. C. NEISH, a former head of the Department of Chemistry at Queen's University and Past President of the Chemical Institute of Canada.

Two Book Prizes of \$15 and \$10. The prizes are awarded annually to students in Chemistry or Chemical Engineering for the best essays or reports on topics in their special fields. The students presenting the best five essays are asked to give their papers before the Kingston Section of the Chemical Institute of Canada and the prize winners are selected from this group. The names of all winners are engraved on a plaque which hangs in Gordon Hall.

Prize of the Society of Chemical Industry. Offered by the Society of Chemical Industry.

Value \$25. Awarded to the undergraduate student in any branch of Chemistry who presents a paper on a chemical subject. The paper may be based on original laboratory or original plant work, critical study of plants and plant operations or chemical processes, critical study of laboratory procedures, or any other chemical subject involving originality. Submissions must be typewritten on one side of the paper and may be of any length, but 3,000 or 4,000 words are suggested as suitable. They may be written in English or in French.

GEOLOGICAL SCIENCES

Manley B. Baker Scholarships in Geology. Founded by AGNES MORELAND BAKER.

Two scholarships of the value of \$125 and \$75 are awarded annually to the students in the Faculty of Arts or Applied Science obtaining highest and second highest standing in the first three courses in Geology—that is GEOLOGY 1, 2 and 11 or GEOLOGY 1, 2 and 12. These scholarships are open only to students proceeding in Honours Geology in Arts or in the Course in Geological Sciences in Applied Science. If two students are

General Scholarships

equal, preference will be given to the one whose need is greater.

Susan Near Scholarship in Geology.

Value \$100. Awarded to the students making the highest standing in GEOLOGY 11, 12 and 14.

See also the *California Standard Company Scholarships*, page 57, above.

General Scholarships

University Scholarships. One of the \$100 scholarships is maintained by the class of 1940 and has been dedicated to one of their class members, SIDNEY WATSON, who was killed on active service on 3 April, 1941; and one of the \$75 scholarships is maintained by the class of 1939.

Six scholarships of the value of \$100 and eight of the value of \$75 are awarded at the close of each session to students completing first, second and third year work.

The Toronto Branch of the General Alumni Association Scholarship. Given by the Toronto Branch of the General Alumni Association for a period of five years.

Value \$100. Awarded under the same conditions as the University Scholarships.

Reuben Wells Leonard Penultimate Year Scholarships.

One scholarship of the value of \$300 and one of the value of \$200. Awarded at the end of the penultimate year to students obtaining highest and second highest standing in the Faculty of Arts. The winning students must be in residence the year following the award.

Robert Bruce Scholarship. Under provisions in the will of ROBERT BRUCE of Quebec, the University has established a scholarship in each of the Faculties of Arts, Applied Science and Medicine.

Value \$100. The scholarship is awarded at the end of the first year to the student who has the highest standing on the regular examinations of that year. One third of the value of each scholarship is paid to the winner in each of the second, third and fourth years of his Course, provided that he is in full attendance in the Faculty in which the award was made.

Andrina McCulloch Scholarships for Public Speaking. These scholarships are awarded annually for the promotion and encouragement of public speaking in the University.

Drama. Two scholarships are awarded as a result of an audience poll at two main productions of the Queen's Drama Guild.

Presentation of Thesis Material. All graduate students are invited to deliver a ten-minute talk on their thesis subject to a panel of judges.

General Scholarships

drawn from the Board of Graduate Studies. Awards are made to the two most lucid speakers.

Arts '50 Scholarship. Given by members of the Class of Arts '50 in sincere appreciation of the benefits received while in course at Queen's University.

Value \$100. Awarded annually to a student entering the final year of the Faculty of Arts who has made a personal contribution to the life of the University and who has maintained at least 66 per cent on the work of the Course. The Committee of Award will be made up of the DEAN OF THE FACULTY, the REGISTRAR, the instructors of the students concerned and the retiring presidents of the Arts Society and the Levana Society. Applications should be made by 1 March on forms which may be obtained from the Registrar.

B'nai B'rith Kingston, Bursary. Founded by the B'nai B'rith Lodge of Kingston.

Value \$50. This Bursary is awarded annually to a student of promising ability but straitened circumstances. The award is made on the basis of the April examinations. Applications are received up until 1 April each year.

C.O.T.C. Scholarships: The Hayunga Scholarship.

The Queen's University Contingent of the Canadian Officers' Training Corps awards a scholarship of \$150 to an officer cadet in each of the Faculties of Arts, Medicine, and Applied Science after he has completed his first summer camp. The medical officer cadet receives the Hayunga Scholarship of \$100 and a C.O.T.C. supplement of \$50. The Contingent also awards a scholarship of \$150, and another of \$100 to the best cadet and the runner-up among those who have completed their second summer camp. Awards are made on soldierly and academic qualifications. Serving soldiers of the Canadian Army (AF) are not eligible.

Pipe Band Scholarship. Maintained by the Queen's University Pipe Band.

Value \$25. Awarded in Session 1953-4 to the best piper among the first year students in all faculties on the basis of a piping contest.

Robert Bruce Bursaries. The will of the late ROBERT BRUCE of Quebec provided for an annual sum to be given in Bursaries "to students of promising ability but straitened circumstances".

A sum of about \$90 is disbursed annually to one or more students in the third or later years in any Faculty. The Registrar will receive applications up to 1 September in each year.

Khaki University and Y.M.C.A. Memorial Fund. This fund is part of a

General Scholarships

sum, left from the Khaki University after the First World War, which was divided among the Canadian Universities.

The interest, amounting to \$240, is used to award one or more scholarships to undergraduate students in any faculty. In awarding these scholarships the need as well as the standing of applicants is considered and preference is given to returned men, or sons or daughters of soldiers of the First World War. Applications are received by the Registrar up to 1 March.

University Women's Club of Kingston Bursary. Given annually by the University Women's Club of Kingston to assist a woman student of promising ability who is in financial difficulties.

Value \$150. Interested candidates should make application to the Registrar by 31 December.

The Leonard Foundation Scholarships.

Leonard Foundation Scholarships are awarded each year to selected students in Universities and Colleges across Canada, including Queen's University. The Trust Deed states: "Preference in the selection of students for Scholarships shall be given to the sons and daughters of the following classes: (a) clergymen; (b) school teachers; (c) officers, non-commissioned officers and men, whether active or retired, who have served in Her Majesty's Military, Naval or Air Forces; (d) graduates of the Royal Military College of Canada; (e) members of the Engineering Institute of Canada; (f) members of the Mining and Metallurgical Institute of Canada."

Applications must be submitted by 1 March. All applicants must be nominated by a member of the General Committee. Mr M. C. Tillotson, the University Treasurer, is a member of the General Committee and application forms may be obtained from his office.

Lilian Coleman Taylor Prize. Value \$60. Awarded annually to the most outstanding woman student from Leeds County registered in any Faculty of Queen's University.

The O. M. Montgomery Memorial Fund. Established by the Aluminum Company of Canada in memory of Mr O. M. MONTGOMERY who graduated from Queen's University in Electrical Engineering in 1905.

This fund is used to provide bursaries for worthy students in need of financial help. It is administered by a Committee consisting of the PRINCIPAL, the VICE-PRINCIPAL, the REGISTRAR, and a representative of the Aluminum Company.

Awards may be made in any faculty, and may be regarded as gifts

at the discretion of the Committee when made to sons or daughters of employees of the Aluminum Company. Otherwise repayment is expected in one or both of the following ways: (a) By service to the University if the beneficiary has time and is qualified for the work available. Such service shall be assistance in a department, or office, or library, or laboratory, or some other comparable employment. (b) By return in cash of the sum granted, or of the part not worked out. In such case the award is regarded as a loan without interest, payable at some convenient time to be agreed upon.

Ottawa Ladies' College Scholarships. "Ottawa Ladies' College was incorporated by Statute of the Province of Ontario in 1869 at the request of citizens of Ottawa 'for the purpose of establishing and conducting a seminary of learning of a collegiate character for the education of female youth'. Its first President was E. B. EDDY and Secretary, Rev. WILLIAM MOORE. Its building was expropriated for war purposes in 1942 and it then ceased to function for the specific purpose for which it was incorporated. In order that it might use its assets for wider educational purposes its Act of incorporation was amended in 1948 and it has now transferred its funds in trust to Carleton College, Ottawa, and Queen's University, Kingston."

1. Four scholarships of \$100 each to be awarded each year to Protestant lady students from the Ottawa Collegiate Institutes or Technical Schools without restriction as to Course or the year of attendance at Queen's.

2. \$500 to be used annually to pay one or more Protestant students from Ottawa for assistance to the teaching staff at Queen's University.

Dominion-Provincial Student-Aid Bursaries, Type B.

Applications for Bursaries will be considered from the students who are enrolled in full time courses provided they have an average of 66 per cent on the last series of examinations.

The student-Aid programme represents a co-operative effort on the part of applicants, their parents and the Ontario and Federal Governments. It is understood that applicants will help to meet the costs of their education by engaging in remunerative employment during the vacation periods and that their parents will contribute in proportion to their means.

Forms of application may be obtained from the Registrar of the University.

Social Engineering Prize. Founded by A. E. MACRAE of Ottawa.

Value \$50. Awarded annually under the following conditions as stated by the donor.

General Scholarships

The object of this prize is to promote on the part of the individual the practice of factually appraising his every act from the point of view of others concerned so that he may make it easiest for them to co-operate in achieving a desired objective. It is based on the idea that maximum social progress primarily demands of education the production of individuals of capacity to lead others in the doing of things which, in the long view are for the continuing good of all. A keen sense of responsibility for the common good, as opposed to the mere temporary benefit of a particular agency, is essential in efficient social leadership.

It is presented annually to the student in attendance at Queen's University who, prior to the beginning of his or her graduating year has developed and exhibited the greatest capacity in leading the student body, or any portion of it, in accomplishing purposes which are considered good by the majority of the student body.

The recipient shall be selected by a committee consisting of the presidents of the faculty societies and the Levana Society and the Principal of the University or his nominee.

George Taylor and Lilian Coleman Taylor Bursary.

A limited amount of money from the George Taylor and Lilian Coleman Taylor Fund is available annually for competent but needy students from Leeds County registered in any Faculty of the University. Applications for grants from this fund should be made through the Registrar.

Welch Scholarship. Founded by FREDERICK WELCH of Kingston.

Value \$100. Awarded in the Faculty of Arts and open for competition only to the sons and daughters of non-commissioned officers and men, who served overseas in the Great War, and of mechanics and labourers, which students shall at the time be bona fide residents of the City of Kingston, preference being given to the children of soldiers. Application for this scholarship must be made to the Registrar not later than 1 March and must give evidence of eligibility in accordance with the terms of the will. The scholarship is awarded on the basis of the April examinations.

Atkinson Foundation Scholarships.

Scholarships from moneys given by the Atkinson Foundation will be awarded in session 1953-4 on the basis of merit and need. In making the awards the Scholarship Committee will take into account the sincerity and future promise of the candidate.

Reuben Wells Leonard Special Scholarships.

Special Reuben Wells Leonard Scholarships for merit and need are available for students of promising ability but straitened circumstances.

The awards are made on a loan or service basis.

St Andrews Exchange.

An exchange between the University of St Andrews in Scotland and Queen's University in Kingston is arranged each year. Under this arrangement the University of St Andrews gives exemption from fees and room and board to a student appointed by Queen's University and in return Queen's University gives free tuition and provides board and lodging for a student from St Andrews. In addition, Queen's University gives a cash award of \$200 toward the travelling expenses of the student appointed to St Andrews and the University of St Andrews gives £50 to the student coming to Queen's.

Applications for the exchange scholarship should be submitted to the Registrar of Queen's University by 1 March of the year of award.

Exchange Plan for Undergraduates of Canadian Universities.

The object of the Exchange Plan is to permit specially selected students to take a year of work at a university in another section of the country, provided that such students undertake to return the following year to their own university. Students accepted under the exchange plan will be permitted to take a full year's work at the desired university with exemption from tuition.

Applications for an Exchange Scholarship must be in the hands of the Registrar not later than 1 March.

GRADUATE FELLOWSHIPS

Travelling Fellowships

The R. Samuel McLaughlin Travelling Fellowship.

Value \$1500. Awarded annually to a graduate of the Faculty of Arts or Applied Science of Queen's University who holds the Master's degree and who has maintained distinguished standing throughout his Course. The candidate must submit and have approved a plan of study, and must present a report on his year's work within twelve months of his appointment. Application must be made by letter to the Registrar not later than 1 March.

The Reuben Wells Leonard Travelling Fellowship.

Value \$500. Awarded annually to a student intending to do post-graduate work at a University within the Commonwealth. Application must be made by letter to the Registrar not later than 1 March.

Graduate Fellowships

Resident Fellowships

The R. Samuel McLaughlin Resident Fellowships.

1. Two Resident Fellowships of \$1200 each; open to men and women students who have taken the Master's degree at Queen's University or an equivalent degree elsewhere and who wish to proceed to advanced study in any field except Medicine. A student appointed to a fellowship is expected to tutor or demonstrate for a period not exceeding six hours per week. If he prefers not to give this service, but to devote his full time to study, his fellowship will be \$350 less in value. Application must be made by letter to the Registrar not later than 1 March.

2. Eight Resident Fellowships ranging in value from \$900 to \$1100 are open to students in Arts and Applied Science who have taken the Bachelor's degree with Honours at Queen's University or an equivalent degree elsewhere and who wish to do graduate work in the Humanities, Social Sciences, Mathematics, Biological Sciences, Geological Sciences, Chemistry, Physics and Engineering. A student appointed to a fellowship is expected to tutor or demonstrate for a period not exceeding six hours per week. If he prefers not to give this service, but to devote his full time to study, his fellowship will be \$350 less in value. In determining the exact value of a Fellowship or Scholarship the committee will take into account the quality of the candidate's past work and award within the limits indicated above. Application must be made by letter to the Registrar not later than 1 March.

Reuben Wells Leonard Resident Fellowships.

Under the will of the late Reuben Wells Leonard provision was made for the following Fellowships. Two fellowships of the value of \$750 and one of \$500, or four fellowships of the value of \$500 to be awarded annually to graduates of Queen's University "who are willing and qualified to undertake independent research work in the interests of higher culture". These fellowships are tenable only by students in attendance at Queen's. Application must be made by letter to the Registrar not later than 1 March.

Departmental Fellowships

A candidate of exceptional ability qualifying for a Departmental Fellowship, valued at less than \$750 may, at the discretion of the Scholarship Committee, be given also a University Fellowship of from \$250 to \$400 to make up a total of not more than \$750.

CHEMISTRY

Milton Hersey Fellowship in Chemistry. Endowed by MILTON L. HERSEY, M.Sc., LL.D., of Montreal.

Value \$400. Awarded annually; it is open to graduates of all universities and technical colleges. The holder of this fellowship shall carry on research work for the whole session and embody the results in a thesis. The research may take the form either of independent investigation or of assistance in an investigation carried on by the department. The fellow may be required to undertake tutorial work not to exceed six hours a week.

Applications for fellowships are received by the Registrar up to 1 March. If no appointment is made by that date, further applications are received up to 1 September.

William Neish Fellowship in Chemistry. Endowed by ADA E. NEISH and LAURA NEISH BLACK of Kingston.

Value \$400. Awarded annually; it is open to graduate students in Chemistry from Queen's or other universities. The holder of this fellowship shall carry on research at Queen's for the whole session under the direction of some member of the Department of Chemistry, and shall embody the results in a thesis. The fellows shall be required to give laboratory instruction or its equivalent not to exceed nine hours a week.

The C.I.L. Fellowship in Chemistry and Chemical Engineering. Founded by the Canadian Industries Limited for research in Chemistry or Chemical Engineering.

Value \$1200. This is a resident fellowship open to graduates of Queen's or other universities. Applications are received by the Registrar up to 1 March.

Shell Oil Fellowship. Established by the Shell Oil Company of Canada.

Value \$900 *plus* tuition, for graduate work in Chemistry, Chemical Engineering, Mechanical Engineering, Geology, Physics, Geophysics. Applications must be submitted by 1 March each year.

COMMERCE

The Maritime Provinces Trade Relations Fellowship.

Value \$320. This Fellowship has been set up by the Maritime Provinces Trade Relations Committee for award to a student who is interested in proceeding to advanced graduate work in Business Administration, Commerce or Economics.

"The Fellowship is to be awarded in the year in which the payment is received from the Sun Life Assurance Company of Canada or in a subsequent year if no eligible or worthy applicant is available, to any graduate

Graduate Fellowships

of a university in Nova Scotia, Prince Edward Island, or New Brunswick,

(a) who has lived in one of these provinces for at least five years before commencing undergraduate work there, or

(b) one of whose parents was born in one of the provinces, where the candidate desires to pursue postgraduate studies leading to a degree in the University's schools of business administration, commerce or economics. The University will select from qualified applicants the one it considers most deserving of financial assistance as the recipient of the Fellowship for one year."

Application must be made to the Registrar by 1 March.

GEOLOGY

The E. L. Bruce Memorial Scholarship. Established in memory of Professor E. L. BRUCE, former head of the Department of Geology and Chairman of the Board of Graduate Studies.

Awarded annually to a student in the Department of Geological Sciences who has already completed a year of graduate work at Queen's University. The recipient shall be known as the E. L. Bruce Research Scholar and shall be required to do at least two hours' work per week for the Department of Geological Sciences, the type of work to be determined by the Head of the Department and to be preferably of an instructional nature.

The Committee of Award shall be made up of the Head of the Department of Geological Sciences who shall be the Chairman, one other member of the Department to be named by the Head, the Treasurer of the University and Dr F. J. ALCOCK of the National Museum of Canada. The PRINCIPAL of the University shall be an ex-officio member of the Committee.

The California Standard Company Fellowship. Established by the California Standard Company.

Value \$750. Awarded annually to an outstanding graduate of Queen's University in Geological Sciences, Geophysics or related Physics, Mining, Metallurgy, Chemical Engineering, Civil Engineering, Mechanical Engineering. In making the awards consideration will be given not only to scholarship, potential ability for research, character and personality but also to interest in problems relating to the exploration for and production of oil.

J. B. Tyrrell Scholarship in Economic Geology. Founded by J. B. TYRRELL, LL.D., of Toronto.

Value \$500. This scholarship is awarded to a graduate student who is working in the field of Economic Geology. Applications must be sent to

Graduate Fellowships

the Registrar not later than 1 March of each year.

The Major James H. Rattray, M.C., Scholarship. Founded by Major JAMES H. RATTRAY, M.C.

Value \$100. Open to students in either the Faculty of Arts or the Faculty of Applied Science; ordinarily awarded on the basis of standing in Economic Geology (including Geology of Canada), a subject of the fourth year, and tenable by a student registered for graduate work in the following year. In any year in which the scholarship cannot be used, it may be awarded at the discretion of the Scholarship Committee either as a prize or as a general proficiency scholarship at the end of the third year, and held by a student whose programme will include Economic Geology in the following year. In determining the award, the Scholarship Committee take into account aptitude as well as academic standing.

HISTORY

Sir James Aikins Fellowship in Canadian History. Created through the generosity of Sir JAMES AIKINS, K.C., LL.D., of Winnipeg, who gave an amount creating an annual revenue of \$200. This was supplemented by an equal sum contributed by Queen's University.

Value \$400. Awarded annually on the basis of distinguished work in the advanced Honours courses in Canadian History, or such other courses as the Professor of Canadian and Colonial History shall determine.

The fellowship is tenable only by students who return to the University for further work in Canadian History and is subject to the same conditions regarding tutorial work as the *R. Samuel McLaughlin Resident Fellowships*. *Western Ontario Graduates Fellowship in History.* Created through the generous contributions of graduates of the University in western Ontario of an amount creating an annual revenue of \$160, which was supplemented by an equal sum contributed by Queen's University. It was established for the purpose of encouraging research in History and of providing junior assistants in the Department of History.

Value \$320. Awarded annually within the discretion of that Department to an advanced student of satisfactory academic standing in attendance at the University, and is subject to the same conditions regarding tutorial work as the *R. Samuel McLaughlin Resident Fellowships*.

INDUSTRIAL RELATIONS

The Clarence J. Hicks Memorial Fellowship in Industrial Relations. Founded by friends and admirers of the late CLARENCE J. HICKS, Chairman of the Board of Trustees of Industrial Relations Counselors, Inc., New York City, and pioneer in the field of Industrial Relations, through

Graduate Fellowships

whose leadership and assistance the Department of Industrial Relations was established at Queen's in 1937.

Value \$600, tenable at Queen's University. The fellowship is awarded annually. If in any year no qualified candidate is available, the income for that year will be accumulated for the purpose of granting an additional or larger fellowship in subsequent years.

The fellowship is available for study of, or research work in, industrial relations to graduates of Canadian universities who are nominated, within not more than five years after graduation (exclusive of any period of active service in Her Majesty's Armed Forces or in the armed forces of any ally of the Dominion of Canada), by the Director of the Department of Industrial Relations of Queen's University. Graduate work in Industrial Relations requires as a prerequisite specialized undergraduate work in economics or commerce.

The award will be made on the basis of intellectual achievement, personality, participation in student activities, standing among fellow students and promise of success in industrial relations work. Need for financial assistance will be taken into account only as between candidates otherwise of equal merit.

PHILOSOPHY

George MacBeth Milligan Fellowship in Philosophy. Endowed by GEORGE MACBETH MILLIGAN of Toronto.

Value \$400. Awarded annually to a graduate who is qualified to carry on independent research work in Philosophy.

The fellow appointed shall carry on research work at Queen's University for the whole session and shall embody the results in a thesis. Such research may take the form of assistance in an investigation. Tutorial or other help may be required, under the same conditions as for the *R. Samuel McLaughlin Resident Fellowships*.

The fellowship may be awarded to a qualified graduate of another university.

PHYSICS

See the *Shell Oil Fellowship* (page 67) and the *California Standard Company Fellowship* (page 68).

FELLOWSHIPS NOT AWARDED BY THE UNIVERSITY

The Marty Memorial Scholarship

This scholarship in memory of Dr ALETTA MARTY, valued at not less than \$1000, is offered by the Queen's University Alumnae Association. Any woman graduate of Queen's University with a Master's degree may hold

Graduate Fellowships

this scholarship, which is ordinarily awarded for a year's graduate work overseas. A committee chosen by the Alumnae Association makes the award.

The scholarship may be awarded to the same woman for a second year. The committee is authorized to withhold the award in any year for financial or academic reasons.

Applications should reach the Registrar not later than 1 January each year. Candidates must have the Master's degree when they hold the scholarship but not necessarily when they apply for it. Further information may be obtained from the Registrar's Office.

This scholarship has been awarded to the following graduates of Queen's University

1937	WINNIFRED (RUTLEDGE) PETERSON
1938	JEANNE (LECAINE) AGNEW
1939	ELISE M. BERRY
1940	ANNE H. (SEDEGWICK) CARVER
1941	ELEANOR (CLARKE) HAY
1942	JOYCE HEMLOW
1943	KATHLEEN BUTCHER
1944	ELLEN THIBAudeau
1945	RETA E. (ANDERSON) WOOD
1946	CLAIRE (CURTIS) TANNER
1947	BARBARA ROOKE
1948	ARLISS DENYES
	honour to AUDREY D. FREEMAN
1949	PAULINE JEWETT
1950	MARION ROBINS
1951	THELMA-ANNE MCLEOD
1952	honour to DOREEN MAXWELL
1953	LLEWELLYA HILLIS

The Rhodes Scholarship

GENERAL REGULATIONS

A Rhodes Scholarship is tenable at the University of Oxford and may be held for three years. Since, however, the majority of Rhodes Scholars obtain standing which enables them to take a degree in two years, appointments are made for two years in the first instance, and a Rhodes Scholar who may wish to remain for a third year will be expected to present a definite plan of study for that period satisfactory to his College and to the Rhodes Trustees.

Rhodes Scholars may be allowed, if the conditions are approved by their own College and by the Oxford Secretary to the Rhodes Trustees, either to postpone their third year, returning to Oxford for it after a period

Graduate Fellowships

of work in their own countries, or they may spend their third year in postgraduate work at any university of Great Britain, and in special cases at any university on the continent of Europe, the overseas dominions, or in the United States, but not in the country of their origin.

The stipend of a Rhodes Scholar is fixed at £400 per year. At most Colleges, and for most men, this sum is not sufficient to meet a Rhodes Scholar's necessary expenses for term-time and vacations, and scholars who can afford to supplement it by £50 per year from their own resources will find it advantageous to do so.

CONDITIONS OF ELIGIBILITY

A candidate to be eligible must: (a) Be a British subject, with at least five years' domicile in Canada, and unmarried. He must have passed his nineteenth year, but not have passed his twenty-fifth birthday on 1 October of the year *for* which he is elected. (b) Have reached such a stage in his course at one of the universities in Canada that he will have completed at least two years at the university in question by 1 October of the year *for* which he is elected.

Candidates may apply either for the province in which they have their ordinary private domicile, home or residence, or for any province in which they have received at least two years of their college education before applying.

In that section of the Will in which he defined the general type of scholar he desired, Mr RHODES wrote as follows:

"My desire being that the students who shall be elected to the Scholarships shall not be merely bookworms, I direct that in the election of a student to a Scholarship regard shall be had to:

his literary and scholastic attainments;

his fondness for and success in manly outdoor sports such as cricket, football and the like;

his qualities of manhood, truth, courage, devotion to duty, sympathy for and protection of the weak, kindness, unselfishness, and fellowship, and

his exhibitions during school days of moral force of character and of instincts to lead and to take interest in his schoolmates for those latter attributes will be likely in after life to guide him to esteem the performance of public duty his highest aim."

Full particulars may be obtained from D. R. MICHENER, 372 Bay St., Toronto, Secretary of the Selection Committee for the Province of Ontario. Two Scholarships may be awarded annually in the provinces of Quebec and Ontario if qualified candidates appear.

Graduate Fellowships

Each candidate for a Scholarship is required to make application to the Secretary of the Committee of Selection of the province in which he wishes to compete, not later than 10 November. Application forms may be obtained from the Registrar's Office.

The following graduates of Queen's University have been awarded Rhodes Scholarships:

1905	J. M. MACDONNELL
1906	A. G. CAMERON
1907	N. S. MACDONNELL
1911	S. SCOTT
1912	H. S. SMITH
1914	A. G. CUMMING
1919	H. R. MACCALLUM
1920	K. E. TAYLOR
1922	A. D. WINSPEAR
1925	L. F. KINDLE
1926	D. A. SKELTON
1936	J. G. DAVOUD
1937	G. M. BROWN
1938	G. P. GRANT
1941	G. S. BOWELL, R. S. RETTIE
1946	F. G. HOOTON
1948	MICHAEL HOWARTH

Canadian Federation of University Women Scholarships

The Canadian Federation of University Women offers the following scholarships:

1. SENIOR. Value \$1500, available for study or research work, open to any women holding a degree from a Canadian university, who is not more than 35 years of age at the time of award. In general, preference will be given to those who have completed one or more years of graduate study and have a definite course of study or research in view.

2. JUNIOR. Value \$1000, open to any woman holding a degree from a Canadian University, who is not more than 25 years of age at the time of award. Preference will be given to students who have studied in only one university and who desire to continue their studies in another. Constance Bennett was awarded this fellowship in 1950.

3. PROFESSIONAL. Value \$1000, available for study in a professional school, open to any woman holding a degree from a Canadian university, who is not more than 35 years of age at the time of the award.

4. THE MARGARET MCWILLIAMS FELLOWSHIP. Value \$1200. This fellowship was awarded for the first time in April, 1953. It is open to any woman holding a degree from a Canadian University who is not more

Graduate Fellowships

than 35 years of age at the time of award, and whose domicile is in Canada although she may be studying elsewhere at the date of application. The proposed place and plan of study must be approved by the Fellowship Committee. Preference will be given to candidates who have started their graduate study and who have a definite course of study or research in view.

The awards are based on evidence of character, intellectual achievement and promise of success in the subject to which the candidate is devoting herself. The proposed place and plan of study or research must be approved by the Scholarship Committee.

Application blanks and further information may be obtained from the Convener of the Scholarship Committee, Miss VIRGINIA CAMERON, McGill University, Montreal, P.Q. Applications and recommendations must be received not later than 1 February.

The following graduates of Queen's University have been awarded the Senior Federation Scholarship:

1930-31	MARY WHITE
1935-36	MARIE (HEARNE) CREECH
1940-41	JEANNE (LECAINE) AGNEW
1941-42	ANNE H. (SEDGEWICK) CARVER
1943-44	JOYCE HEMLOW
1944-45	KATHLEEN E. BUTCHER
1946-47	BARBARA M. ST. G. CRAIG
1947-48	honour to BARBARA ROOKE
1948-49	CAROL HOPKINS
1952-53	DOREEN MAXWELL

Daughters of the Empire Postgraduate Fellowship (Overseas)

As part of a War Memorial, the Imperial Order Daughters of the Empire offers annually in each province in Canada a scholarship for one year's postgraduate study in Great Britain. The value of the scholarship is \$1500 a year.

The conditions under which this scholarship is awarded are as follows:

(a) Candidates may be men or women. They must be British subjects with at least five years' residence in Canada, and unmarried. Each candidate must hold a degree from a recognized university or degree-granting college in Canada, and must have done or be doing postgraduate work.

(b) In each province a Committee of Selection will award the scholarship. Other things being equal, preference will be given the returned man, his sister, brother, son or daughter. The Committee of Selection will con-

Prizes

sider not only academic attainments and promise, but also personal character and physical fitness.

(c) Applications for this scholarship should be sent before 15 October, 1953, to Mrs. O. M. Martin, Provincial Educational Secretary, I.O.D.E., 182 Lowther Avenue, Toronto, Ontario, who will provide additional information about the scholarship.

The following graduates of Queen's University have been awarded Daughters of the Empire Overseas Scholarships:

1921-22	WATSON KIRKCONNELL
1923-24	HARTLEY MUNRO THOMAS
1936-37	HENRY STANLEY FERNS
1938-40	THOMAS JOHN ALLEN
1948-50	DAVID McQUEEN

Detailed information about fellowships may be found in the *Calendar of Graduate Studies*, a copy of which will be sent on request.

Prizes

The Alexander MacLachlan Peace Prize. Established by the MACLACHLAN family in memory of ALEXANDER MACLACHLAN, former President of International College, Smyrna, who 'throughout his life worked for a better understanding among nations.

Value \$30. Awarded annually to the student making the highest standing in HISTORY 27.

Prince of Wales Prize. Founded in 1860 by H.R.H. the PRINCE OF WALES.

A prize of the value of \$32 in books. Awarded to the graduating student in the Faculty of Arts who is adjudged to have the best academic record at Queen's.

The M. C. Cameron Prize. Founded by the late M. C. CAMERON, M.P., Goderich.

Value \$40. Awarded to the best Gaelic scholar, reader or speaker, provided that he does not take less than 50 per cent of the total number of marks in the competitive examination. Application for examination should be submitted to the Registrar before 15 January in each year. Work prescribed: any 600 lines of Ossian's *Fingal*, or an equivalent amount of any other Gaelic literature selected by the candidate; Blackie's *Language and Literature of the Scottish Highlands*, Gaelic Grammar, translation at sight of Gaelic into English and English into Gaelic.

Senator Davies Poetry Prize. Given by Senator W. RUPERT DAVIES of Kingston for a period of ten years.

Prizes

Value \$500. Awarded for the best English poem of not more than fifty lines. Candidates must submit their poems by 1 February of the year of award. Three typewritten copies of each poem must be submitted. They must be enclosed in one envelope addressed to the Registrar and marked on the outside "Senator Davies Poetry Prize". The writer's name must not be given but each copy must bear a motto instead of the author's name. Another sealed envelope inscribed with the same motto should be included containing (a) the author's name and (b) a signed declaration that the poem is the author's own original unaided composition. A competitor may submit more than one but not more than three poems but if more than one is submitted each poem must be sent in enclosed in a different envelope with a different motto for each entry.

The competition is open to all resident undergraduates of the Faculty of Arts who are registered as full time students on 1 February of the year of award.

The subject for the competition in 1953-4 is "*Biography*".

Whig-Standard Essay Prize. Given by Senator W. RUPERT DAVIES of Kingston for a period of ten years.

Value \$500. Awarded for the best English essay of not fewer than 3,000 or more than 5,000 words. Candidates must submit their essays by 1 February of the year of award. Three typewritten copies of each essay must be sent in. They must be enclosed in one envelope addressed to the Registrar and marked on the outside "Whig-Standard Essay Prize". The writer's name must not be given but each copy must bear a motto instead of the author's name. Another sealed envelope inscribed with the same motto should be included containing (a) the author's name and (b) a signed declaration that the essay is his own original unaided composition.

The competition is open to all resident undergraduates of the Faculty of Arts who are registered as full time students on 1 February of the year of award.

The topic for the competition in 1953-4 is "*A University of 2053*".

Summer School Prizes

Curtis Memorial Foundation. Founded in memory of the late J. T. CURTIS of Ottawa.

Value about \$56. Awarded in October to a graduate of that year (April or September), who has completed the degree Course by extramural and Summer School work. The award is made by a special committee

Prizes, Medals

on the basis of scholastic ability, interest in athletics, and service to the Summer School.

Edgar Forrester Scholarship in Oral French. Founded by the late EDGAR FORRESTER, Esq.

Value \$20. Awarded to the student making the highest standing on the Summer School examination in Oral French.

Matheson Prize. Founded by the Queen's University Summer School Association in honour of the late Dean JOHN MATHESON, one time supervisor of extramural work and from 1939 to 1943 Director of the Summer School, an ardent believer in extension courses, friend and counsellor of many generations of students.

Value \$25. Awarded to the Summer School student standing highest in the August examination in MATHEMATICS 2.

The W. T. MacClement Prizes. Founded by the Queen's University Summer School Association in memory of Dr W. T. MACCLEMENT, the first Director of the Summer School.

Four prizes of the value of \$25 each. Awarded on the results of the August Examinations in ENGLISH 2, PHILOSOPHY 1, HISTORY 3 and BIOLOGY 1 to the Summer School students who stand first in these courses.

McNeill Prize. Founded by the Queen's University Summer School Association to honour Dr W. E. MCNEILL, former Vice-Principal and Treasurer, a wise friend and counsellor to Summer School Executives.

Value \$25. Awarded to the Summer School student standing highest in the Fall examination in the English pass course numbered beyond ENGLISH 2.

Wallace Prize. Founded by the Queen's University Summer School Association in honour of Dr ROBERT C. WALLACE, Principal of Queen's University from 1936 to 1951.

Value \$25. Awarded to the Summer School student standing highest in the August examination in GEOLOGY 1.

Medals

A medal is awarded annually by the University to the candidate in each major subject who has made the highest standing on the whole of his Honours work in that subject, provided that such standing is Class I.

General Regulations

Changes in regulations become effective immediately. All inquiries regarding regulations should be addressed to the REGISTRAR.

Regulations Regarding Courses

DETERMINATION OF STANDING

1. Students are expected to be present at all lecture and laboratory periods in their courses. Essays, exercises, reports, and laboratory work must be done at the prescribed times during the session to the satisfaction of the Department concerned.

2. All final marks, including those assigned after supplemental examinations, are determined not merely on the results of the formal examinations but also on the standing obtained by the work of the whole term or session, including essays, exercises, reports, class tests and laboratory work.

3. The Faculty may, at any time, either during the term or after the close of the term, require any student to withdraw whose conduct, attendance, work, or progress is deemed unsatisfactory.

NUMBER OF COURSES IN A YEAR

4. Students are given credit for the full work of the year if they pass each of five courses with 50 per cent. Students whose standing is as low as 45 per cent in one subject are considered to have full credit for the year if they make at least 50 per cent on each of the other subjects and an average of 60 per cent on the whole.

5. No student is allowed to take more than five lecture courses in the academic year except as in the following provisions. (a) Students are permitted to undertake extramural or extramural and Summer School work during the summer following a winter session in which they have passed in five courses. (b) Students lacking only six courses for degree may take these courses in the final regular winter session with the approval of the Dean of the Faculty.

6. Intramural students, unless excused for some special reason, must take five courses in each of the first and second years. In no case are such

Regulations: Courses, Examinations

students allowed to take fewer than three courses in the first or second year. In exceptional circumstances they may, with the consent of the BOARD OF STUDIES, take three or four courses in the winter session and the rest in the summer provided that they attend the Summer School.

7. Students who, without special permission, drop a course, are considered to have failed in that course.

PREPARATORY COURSES

8. Students with full Matriculation who desire to begin work in Greek, German or Spanish may count course A in one or more of these subjects towards a Pass degree. They may count course A in one only of these subjects as a free option towards an Honours degree. Unmatriculated students who use an A course in a language to remove an entrance condition may not count this course as a credit towards a degree.¹

9. Courses A and 1 may not be substituted for courses 1 and 2 where the latter are definitely prescribed.

FAILURES AND LOW GRADES

Loss of Year

10. (a) Students who at the final examinations fail in more than two courses are considered to have lost their year and may not write supplemental examinations. Students, who at the beginning of the next academic year lack credit on more than one course or two half-courses of the previous year's work, are considered to have lost their year. (b) Students who have lost their year may retain credit only in those courses on which they have obtained at least 62 per cent.

Withdrawal

11. (a) Students who fail in four or five courses at the final examinations are required to withdraw from the Faculty of Arts. (b) Students who twice lose a year are required to withdraw from the Faculty of Arts.

12. Students who are required to withdraw from the Faculty of Arts, may be re-admitted in some subsequent session only if they give convincing evidence that they can profit from University work.

Examinations

MID-TERM EXAMINATIONS

13. One-hour examinations in regular class periods may be held by any instructor whenever he thinks advisable.

¹ See p 35, Admission by Special Regulation.

Regulations: Examinations

MID-YEAR EXAMINATIONS

14. Midwinter examinations in all whole courses are held during the last week before the Christmas holidays. In these courses credit not exceeding 50 per cent of the final marks may be assigned to the work of the first term. The attention of the students is called to REGULATION 2. Final examinations in half-courses of the first term are held in January (*see page ix*).

APRIL EXAMINATIONS

15. Final examinations in all whole courses, half-courses of the second term and reading courses are held in April. Intramural students are expected to take examinations in all the lecture courses in which they are registered in the second term. In special circumstances and on the recommendation of the professor concerned they may be given permission to postpone until August examinations in courses numbered under 10. They may not postpone examinations in Honours courses. Examinations in the first and second reading courses in all subjects are held in both April and September. The attention of students is specially drawn to REGULATIONS 2 and 10.

ADMISSION TO EXAMINATIONS. (*See also REGULATIONS 15 and 19.*)

16. Ordinarily students are not permitted to take examinations unless they have registered on the prescribed date within the academic year in which they present themselves, but graduates not in attendance who wish to take examinations merely to raise their standing in courses already passed, may delay their registration until 15 February. (*See REGULATION 21.*)

17. No candidate is admitted to the examination hall later than thirty minutes after the beginning of the examination.

18. No candidate is permitted to take any books or papers into the examination hall except by express direction of the examiner.

SUPPLEMENTAL EXAMINATIONS

19. Supplemental examinations are held in August in all Pass courses and in the first course of Honours but no supplementals are given beyond the first course in Honours in a major or minor subject for the Honours B.A. degree. Papers are set in all subjects offered at the Summer School and in the first and second reading courses for those who do this reading during the summer. Candidates must apply to the Registrar by 15 June for permission to write on the courses in which they wish to be examined. The application must be on printed forms supplied for the purpose and must be accompanied by the fee of \$6 for each whole course, \$3 for each half-course.

Regulations: Examinations

20. (a) A student who fails the final examination in a course may write a supplemental at the next regular examination period provided that a supplemental is offered in the course concerned and that the student has not lost the year. (b) Students who fail in any course may not come up again for examination in that course except for a supplemental examination as provided in section (a) above without re-registering in the course and repeating the full work.

21. Students who have passed the examination in a course may re-write for higher standing. This privilege is extended to the third examination period after the first time of writing. Ex-service men and women affected adversely by this regulation may be given consideration by the BOARD OF STUDIES who will recommend action to the Faculty of Arts.

SPECIAL EXAMINATIONS

22. Students who for any reason fail to take an examination on the appointed date may be required to take a special examination. The fee is five dollars for one special examination; ten dollars for two or more examinations.

REREADING OF EXAMINATION PAPERS

23. Examination papers of candidates failing by only a few marks are reread with care and there is little likelihood of the original mark being changed by a further rereading. Students who wish to have a paper reread by the instructor and an independent examiner must make application within two months of the examination and pay a fee of \$10. If as a result of a rereading a mark is raised to a pass, the fee is refunded in full to the student.

DETERMINATION OF STANDING

24. In determining a student's standing at a sessional examination the Departments take into account the entire class record (*See REGULATION 2.*)

STANDING

25. (a) In Pass courses numbered under 10, Grade A—75 per cent; Grade B—62 to 74 per cent; Grade C—50 to 61 per cent. (b) In Honours courses numbered 10 or over and Reading courses, Grade A—75 per cent; Grade B—66 to 74 per cent; Grade C—55 to 65 per cent; Grade D—50 to 54 per cent. (c) Standing of 62 per cent or more on a course numbered 10 or over counts as B grade towards a Pass degree. Grade D standing on an Honours course counts towards a Pass degree but carries no credit towards an Honours degree.

Definitions, Synopsis of Courses

Definitions

Courses

A candidate for the degree of Bachelor of Arts may take a General Course or an Honours Course. The latter requires greater specialization and higher standards in the work of the main subjects. Details are given on pp 86-88 below.

Courses and Half-Courses

The word "Course", when printed with an initial capital, is used to indicate a programme of work leading to a degree or certificate. The word "course", printed with an initial small letter, indicates a unit of work occupying, as a rule, three hours a week throughout the session. A "half-course", on the other hand, usually occupies only one term, though occasionally it may run through the session. Two half-courses are equivalent to a whole course, and when the amount of work to be done is defined in courses, it is to be understood that an equivalent in courses and half-courses may be offered.

Numbering of Courses

Preparatory courses in the languages are designated by the letter A.¹ Other courses are numbered with Arabic numerals (LATIN 1, GREEK 2.) Half-courses have in addition to the numerals the letter *a* or *b*, according as they are offered in the first or second term.

The fundamental courses in each subject are ordinarily numbered 1 and 2 (PHILOSOPHY 1, POLITICS 2) and must be taken by all proceeding to advanced work in the subject. Other courses numbered under 10 are for students on the General Course only. Courses numbered 10 and upward are Honours courses, though in most departments they are open to students on the General Course provided that prerequisites have been completed satisfactorily.

Synopsis of Courses

The following Courses of undergraduate study are offered in the Faculty of Arts:

General Courses leading to the degree of B.A.;

Honours Courses leading to the degree of B.A. with Honours and admission to the course of study leading to the Interim High School Assistant's Certificate, Type A;

Combined Course in Arts and Theology;

Combined Course in Arts and Physical and Health Education.

¹ See Sections 8, 9, p 79 above, General Regulations.

Regulations: General B.A.

Candidates are subject to changes in Regulations or Courses made after their first registration unless in the judgment of the BOARD OF STUDIES undue hardship is involved. All inquiries regarding Regulations should be addressed to the REGISTRAR.

General B.A.

Candidates entering the General Course with Grade XIII standing in five subjects¹ are required to take fifteen courses for the General B.A. degree. Those entering with only four subjects of Grade XIII must take sixteen courses. Ex-service men and women entering on the special Junior Matriculation (Ontario Grade XII) approved by the National Conference of Canadian Universities² shall offer a total of twenty courses which may include as many as five Senior Matriculation (Grade XIII) subjects for which they may have credit.

The General Course provides for distribution and concentration of work as follows:

A. *Compulsory courses*, all of which must be done at the University:

(1) ENGLISH 2 to be taken in the first year.

First year students must take ENGLISH A if they fail to pass a test set by the Department of English³. Any student who is not taking ENGLISH A or has not taken it, may be required by the Faculty, on recommendation of the BOARD OF STUDIES, to do so. Students who pass a test in December will be given credit in the course; otherwise they must continue in it until they have passed an examination. Once a student is enrolled in ENGLISH A, this course becomes one of the requirements for his degree.

(2) PHILOSOPHY 1 ordinarily taken in the first year.

Students who, because of conflicts in the time table, cannot take PHILOSOPHY 1 in the first year must take PHILOSOPHY 5 in one of the upper years.

(3) One course in Psychology, History, Economics or Politics.

(4) One language course in addition to ENGLISH 2.

For example, FRENCH 1 if the student has Grade XII French; FRENCH 2 if the student has Grade XIII French; similarly in Latin, German, Greek, Spanish. An "A" course does not fulfill this requirement.

(5) One science.

B. *Concentration of work* to the extent of three university courses in each of the three subjects, or five courses in one subject, four courses in another. REGULATION 2 under each departmental prescription gives the sequence of courses approved by the department concerned. Students electing to

¹ See p 31 above, Entrance Requirements.

² See p 34 above, Entrance Requirements.

³ See p 123 below.

General B.A.

offer the concentration of five and four rather than three groups of three, must select their advanced courses in consultation with the department concerned and they must have the prerequisites for these courses. In arranging the concentration of work on the Course of study for the General B.A., students should select logical combinations of subjects, for example, English, History and French, or Philosophy, History and Politics, or Mathematics, Physics and Chemistry. Those preferring to offer five courses in one subject and four courses in another are advised to choose related subjects.

Additional classes to make up the required total may be chosen freely subject to the regulations governing prerequisites.

Standing. Candidates must make a standing of Grade B or better in at least half their work at the University. In courses numbered 10 or over 62 per cent counts as the equivalent of Grade B.

Programmes illustrating how the General Course may be planned are shown on p 85 following.

The following programmes illustrate how the General Course may be planned:

English, History, French

1st Year
 ENGLISH 2
 PHILOSOPHY 1
 HISTORY 3
 FRENCH 2
 a science¹

2nd Year
 ENGLISH 3, 5, or 7
 FRENCH 3
 HISTORY 5
 two options

3rd Year
 ENGLISH 3, 5, or 7
 FRENCH 14
 HISTORY 6
 two options

Philosophy, Economics, Politics

1st Year
 ENGLISH 2
 PHILOSOPHY 1
 POLITICS 2
 ECONOMICS 4
 a language²

2nd Year
 PHILOSOPHY 5
 a science¹
 one option
 ECONOMICS 10³, 12, or 13
 POLITICS 30³

3rd Year
 PHILOSOPHY 23
 ECONOMICS 10, 12, 13, or 23
 POLITICS 31 or another
 course in Politics selected
 on the advice of the De-
 partment
 two options

Mathematics and Physics, Biology, Chemistry

The following programme presupposes Grade XIII standing in Mathematics, Physics and Chemistry. If the student has also Grade XIII standing in Biology, the work in Biology will be: first year—BIOLOGY 10 or 16; second year—BIOLOGY 10 or 16, third year—BACTERIOLOGY 10 or BIOLOGY 26. If Physics has not been taken in Grade XIII, the student will have to offer PHYSICS 1 as one of the options since it is prerequisite to PHYSICS 2. If Chemistry has not been taken in Grade XIII, the student may take CHEMISTRY 1 in the first year, CHEMISTRY 2 in the second year, and CHEMISTRY 11 or 12 in the third year.

1st Year

ENGLISH 2
 BIOLOGY 1
 a language²
 MATHEMATICS 2
 CHEMISTRY 2

2nd Year

BIOLOGY 10
 CHEMISTRY 11
 MATHEMATICS 3A & 7B or
 10A & 11B
 PHILOSOPHY 5
 one option

3rd Year

BIOLOGY 16
 CHEMISTRY 12
 PHYSICS 2
 two options

¹ One of Biology, Physics, Chemistry, Geology.

² One of French, German, Greek, Latin, Spanish. An "A" course does not fulfil this requirement.

³ For admission to ECONOMICS 10, B standing in ECONOMICS 4 is required; for admission to POLITICS 30, B standing in POLITICS 2 is required.

Honours B.A.

There are several types of Honours Courses: (a) The Specialized Honours course; (b) The General Honours Course¹; (c) The Honours Course for students preparing for admission to the Ontario College of Education for teachers' certificate in English and French, German or Spanish, English and Latin, Latin and French, French and German or Spanish.²

ADMISSION TO HONOURS

(a) At the end of the first year candidates for Honours must make formal application to the REGISTRAR. These applications are referred first to the departments concerned for recommendation, and then to the Committee of Departments for final action. Candidates are admitted to an Honours Course if in their special subjects they have made at least 62 per cent in the preceding Pass class and at least 60 per cent in the preceding class numbered 10 or over, and if their standing in other subjects is considered satisfactory. Candidates offering Pass or Honours courses from a second Department as part of their Major are required to make at least 55 per cent in these courses. They should note that these courses will be taken into account when the final standing for the degree is determined. Candidates should note also that they must have a minimum mark of 55 per cent on each course in the Minor numbered 10 or over and an average of at least 60 per cent on honours courses in the Minor.

(b) At the end of each year each candidate's record is reviewed by the COMMITTEE OF DEPARTMENTS to determine fitness to proceed in Honours. All not doing satisfactory work are required to revert to a Pass Course.

SPECIALIZED HONOURS COURSES

The specialized Honours degree may be taken in the following departments: Biochemistry, Biology, Chemistry, Greek, Latin, English, French, Geological Sciences, German, History, Mathematics, Philosophy, Physics, Political and Economic Science, Psychology and Spanish.

The programme is made up of eighteen courses from Grade XIII standing in five subjects, with a major consisting of lecture and reading courses in the subject of the degree, a minor made up of lecture courses in a related subject, and compulsory general courses. The requirements for each degree Course are outlined in detail under the departmental prescriptions.

¹ See p 87 below.

² See p 88 below, Interim High School Assistant's Certificate.

GENERAL HONOURS COURSE

The general Honours Course is intended for the student who does not plan to specialize to the extent required by the specialized Honours Course but who wishes to have a programme providing for advanced work in three subjects of study. The requirements for degree are made up of nineteen courses from Grade XIII in five subjects (twenty courses from Grade XIII in four subjects) as follows: (a) Lecture courses in each of the three special subjects (see course requirements for each subject under the departmental prescription); (b) One reading course in each of the three special subjects; (c) Compulsory general courses as required on the specialized Honours Course; (d) The candidate is required to take, in addition to course examinations, one general examination in each special subject.

The regulations applying to specialized Honours Courses apply also to the General Honours Course.

Length of Course

The Course for the degree of B.A. with Honours normally covers four years from Grade XIII in five subjects. Ordinarily candidates are not permitted to register in any academic year in more than five courses including reading courses. It is possible, however, for candidates of exceptional ability to complete the Course in three years from Grade XIII by taking five regular lecture courses or the equivalent in hours in each of the three years, and by doing the reading courses in the penultimate and final years and in the intervening summer. Such candidates must have passed with Grade A standing in each special subject and an average of Grade A on the year's work preceding admission to Honours.

Final Year Examinations

In addition to the regular sessional examinations, candidates must write general examinations at the conclusion of their Course as follows:

(a) Specialized Honours Course—two general examinations in the major subject.

(b) General Honours Course—one general examination in each of the three special subjects.

(c) Courses for students preparing for admission to the Ontario College of Education for teachers' certificates in English and French, German, Spanish or Latin, Latin and French, French and German or Spanish—one general examination in each of the two subjects.

Teachers' Certificates

It should be noted that Departments may, with the permission of the Faculty, excuse students in the final year from course examinations in the Major subject and give four or five general examinations.

Classes in Honours

Degree standing is awarded in the specialized Honours Course on the basis of proficiency in honours courses in the major subject; in the General Honours Course, in the three subjects combined; in the Courses leading to Teachers' Certificates in the languages, in the two special subjects.

General Degree on an Honours Course

Candidates who pass all their classes but fail to attain honours because they have made less than 60 per cent in one or both of the major and minor are granted a General degree.

Social Work

Students who wish to proceed to social work after graduation should choose a programme of undergraduate courses which so far as possible includes Psychology, Sociology, Politics and Economics. Courses in Canadian and English History are also desirable. Directors of Canadian Schools of Social Work are willing to give advice to undergraduates wishing to plan a course acceptable to the Admissions Committees of their schools.

Courses for Teachers' Certificates (Ontario)

HIGH SCHOOL TEACHER'S CERTIFICATE

Under the regulations of the Ontario Department of Education a candidate for a High School Teacher's Certificate who holds a First or Second Class certificate and who has had experience in the Public, Separate or Continuation Schools of the Province may be partially relieved from attendance at the Ontario College of Education.

The academic standing for admission to the professional Course leading to the Interim High School Assistant's certificate, Type B, is the degree of Bachelor or Master of Arts, Bachelor or Master of Science, or Bachelor of Commerce, from a university within the Commonwealth, based upon Courses approved by the Minister of Education.

INTERIM HIGH SCHOOL ASSISTANT'S CERTIFICATE, TYPE A

By an agreement between Queen's University and the Department of Education of Ontario, graduates of the Faculty of Arts in certain specified

Teachers' Certificates

Honours Courses may be certified as having completed the academic requirements for admission to the course of study leading to the Interim High School Assistant's Certificate, Type A, at the Ontario College of Education.

The Department of Education has authorized certificates in

Classics
Latin & French
Latin & English
English
English & French
English & German
English & Spanish
French & German or Spanish
History
Mathematics
Mathematics & Physics
Science
Commerce
Physical and Health Education

Candidates for admission to the course of study at the Ontario College of Education leading to the Interim High School Teaching Assistant's Certificate, Type A, are required to complete the following requirements.

Classics. The regular Honours degree Course in Latin and Greek (see pp 114 and 118).

Latin and French or English

LATIN 2, 12, 13, ANCIENT HISTORY 4; and two of LATIN 20, 30, ANCIENT HISTORY 51;

ENGLISH 2 or 5, 10, and four of 14, 15, 19, 20, 22; or FRENCH 2, 10, 11, 20, 21, 23; CLASSICS R1 and 2; and ENGLISH R1; or CLASSICS R1 and two reading courses in English or French;

Compulsory general courses: PHILOSOPHY 1 or 5, a science, a free option. If the candidate has Grade XIII standing in a science, the second general course may be a free option.

One general examination in each of the two special subjects.

English and French, German or Spanish

ENGLISH 2 or 5, 10, and four of 14, 15, 19, 20, 22;

FRENCH 2, 10, 11, 20, 21, 23;

GERMAN 2, 10, 12, 14, 15, 16; or SPANISH 2, 10, 22, 24, 29, 30;

Two reading courses in English and one in French, German or Spanish, or two reading courses in French, German or Spanish and one in English;

Compulsory general courses: PHILOSOPHY 1 or 5, LATIN 2, a science. If the candidate has Grade XIII standing in a science, the third general course may be a free option.

Teachers' Certificates

French and German or Spanish

FRENCH 2, 10, 11, 20, 21, 23;

GERMAN 2, 10, 12, 14, 15, 16; or SPANISH 2, 10, 22, 24, 29, 30;

Two reading courses in French and one reading course in German or in Spanish; or one reading course in French and two reading courses in German or in Spanish;

Compulsory general courses: ENGLISH 2, LATIN 2, PHILOSOPHY 1 or 5.

If the candidate has not offered a Grade XIII science on admission, a course in science must be taken in place of the reading course in the subject in which two reading courses are normally required.

One general examination in each of the two special subjects.

English. The specialized Honours degree Course in English (see pp 121-2) with a minor in Social History as follows: HISTORY 3 or 5 or 6, 12, and two courses to be selected from HISTORY 14, 16, 18A, 18B, 19, 24, 28. FRENCH 2 or GERMAN 2 must be included among the general courses.

History. The regular Honours Course in History (see pp 143-5) with a minor in Political and Economic Science made up of ECONOMICS 4, POLITICS 2, ECONOMICS 10, and two further courses in Politics or Economics. GEOLOGY 1 and HISTORY R5 are also prescribed.

Mathematics. The Honours Course in Mathematics with a minor to be selected on the advice of the Department of Mathematics.

Mathematics and Physics. The Honours Course in Mathematics and Physics or Physics and Mathematics.

Science. The General Honours Course in Science for Teachers as follows:

(a) BIOLOGY 10, 11, 16, 19, R1;

CHEMISTRY 2, 11, 12, 14 or 17, R1;

PHYSICS 2, 11, 14A, 13B, R1, MATHEMATICS 2;

Compulsory general courses to complete the work for degree: ENGLISH 2, PHILOSOPHY 1 or 5, a language, a free option. If the candidate has Grade XIII standing in a language he may use the third general course as a free option.

One general examination in each special subject.

or (b) The regular Honours Course in two of Biology (see pp 102-4), Chemistry (see pp 108-9), Physics (see pp 162-3), with two courses from the third science in place of free options or in substitution for courses ordinarily prescribed. For example: with Chemistry as major, Biology as minor, PHYSICS 1 unless already taken in Grade XIII is offered in place of the free option and PHYSICS 2 is substituted for one of CHEMISTRY 22, 24, 25. Similarly, with Biology as major and Chemistry as minor, PHYSICS 1 unless offered as one of the subjects of Grade XIII is taken as one of the courses in the minor and PHYSICS 2 as the supporting course or in place of a free option as prescribed under the departmental prescription for Biology. With Physics as major, Biology as minor, CHEMISTRY 1 is offered in place of a free option and CHEMISTRY 2 in place of a reading course. With Chemistry as major, Physics as minor, BIOLOGY 1 unless already taken as one of the subjects of Grade XIII is offered in place of the free option and BIOLOGY 10 or 16 is substituted for one of CHEMISTRY 22, 24, 25.

Teachers' Certificates

COMMERCIAL SPECIALIST'S CERTIFICATE

Students working with the Department of Education towards the Commercial Specialist's Certificate are granted exemption from attendance and examination in the following subjects if they pass the equivalent university courses with Grade A or B standing. They are given exemption from attendance only if they pass the courses with Grade C standing:

<i>Department of Education Courses</i>	<i>University Equivalent</i>
Arithmetic of Investment	MATHEMATICS 7B
History of Commerce and Industry	ECONOMICS 4
Theory of Economics	ECONOMICS 10 ¹
Money and Banking	ECONOMICS 12
Business Law	COMMERCE 60
Book-keeping	COMMERCE 63
Accountancy Theory	COMMERCE 64
Accountancy Practice	COMMERCE 67B

Graduates in Commerce whose courses have included MATHEMATICS 7B and COMMERCE 67B are exempted from attendance and examination in all the subjects of the Commercial Course (Accountancy Option) except Shorthand Theory, Shorthand Practice and Transcription, Typewriting, Penmanship, Office Practice and Business Papers, Minor and Major Methods.

INTERIM HIGH SCHOOL ASSISTANT'S CERTIFICATE, TYPE A for Graduates in Applied Science

Graduates of the Faculty of Applied Science may obtain the standing required for the Interim High School Assistant's Certificate, Type A, by taking certain additional courses as stated below.

Mathematics and Physics. A degree in Applied Science in one of Mining Engineering, Chemistry, Geological Sciences, Chemical Engineering, Metallurgical Engineering, or Civil Engineering, with a subsequent standing of at least 55 per cent in each of the following courses and an average of at least 66 per cent in the work of each subject: MATHEMATICS 12A, 15B, 19, and one other course, numbered over 19; PHYSICS 10A, 12B, 13B, 14A—credit towards these being given when equivalent subjects have been satisfactorily taken in Course.

A degree in Applied Science in the Department of Electrical Engineering or Mechanical Engineering with subsequent standing of at least 55 per cent in each of the following courses, and an average of at least 66 per cent on the work of each subject: MATHEMATICS 12A, 15B, and one other course, numbered 19 or over; PHYSICS 10A, 12B, 13B, 14A—credit towards these being given when equivalent subjects have been satisfactorily taken in Course.

¹ Theory of Economics is equivalent to ECONOMICS 1 in calendars prior to 1939-40

Teachers' Certificates

A degree in Applied Science in the Department of Physics with an average of at least 66 per cent in MATHEMATICS VII, MATHEMATICS VIII and MATHEMATICS X and with subsequent standing of at least 55 per cent in each of the following courses and an average of at least 66 per cent: PHYSICS 10A, 12B, 13B, 14A—credit towards these being given when equivalent subjects have been satisfactorily taken in Course.

Science. A degree in Applied Science in one of the Departments of Mining Engineering, Chemistry, Geological Sciences, Chemical Engineering, Metallurgical Engineering or Physics, with a subsequent standing of 55 per cent in each of the following courses and an average of at least 66 per cent in the work of each subject in courses numbered 10 or over:

BIOLOGY 1 (or Grade XIII Biology), 10, 16, 11 or 19; PHYSICS 11, or 14A and 13B; GEOLOGY 1, 2; CHEMISTRY 11, and one of 12, 14, 17 not previously taken—credit towards these being given when equivalent subjects have been satisfactorily taken in Course.

INSPECTORS' CERTIFICATES

The academic requirements for a Public School Inspector's certificate are as follows:

(a) An Honours degree in Arts or the degree of B.Com (Commercial Specialists' Option) in accordance with the present agreement as prescribed for Specialist qualifications, or

(b) A Pass degree in Arts with a standard of 66 per cent in any five courses beyond course 1, and Grade B in any other five courses.

(c) Candidates shall extend their Course over at least four years from the Secondary School Graduation Diploma and they shall fulfil the residence requirement prescribed by the Faculty of Arts for a degree in Arts (see page 39, regulation 13).

Combined Course in Arts and Physical and Health Education

A course of study leading to the degrees of Bachelor of Arts and Bachelor of Physical and Health Education in four years. By agreement between Queen's University and the Ontario Department of Education a graduate of the Course in Arts and Physical and Health Education is admitted to the course of study at the Ontario College of Education leading to the Interim High School Assistant's Certificate, Type B, and to the High School Assistant's Certificate, Type A, in Physical and Health Education.

ADMISSION

The Secondary School Graduation Diploma or its equivalent, including English, a second language, History, Mathematics and two options, and Grade XIII standing or its equivalent in English, Latin or Mathematics

Arts & Physical Education

and two or three other subjects. Students entering with as few as four subjects, that is, English, Latin or Mathematics and two further subjects, are required to have no lower than third class Honours standing in at least three of these subjects.¹ Candidates are advised to offer Grade XIII English, Mathematics (at least two papers, of which one should be Trigonometry), Physics, Chemistry and one optional subject.

FEES

For full information about fees see pp 45, 46, 47.

COURSE OF INSTRUCTION

1st YEAR. *Arts:* One or two of BIOLOGY 1, CHEMISTRY 1, PHYSICS 1², ENGLISH 2, PSYCHOLOGY 2, a language (other than English), an option (subject to timetable, for students taking only one science). *Physical Education*³: Women—Seasonal sports (tennis, basketball, badminton, volleyball), Gymnastics and dancing, Aquatics; Men—Seasonal sports (track and field athletics, basketball), Gymnastics and apparatus, Aquatics.

2ND YEAR. *Arts:* PHILOSOPHY 5, PSYCHOLOGY 3, POLITICS 2, ENGLISH 3⁴, BIOLOGY 16. *Physical Education:* Women—Seasonal sports (archery, track and field athletics), Gymnastics and dancing, Rules and officiating, Aquatics; Men—Seasonal sports (football, hockey), Rules and officiating, gymnastics and apparatus, Aquatics.

3RD YEAR. *Arts:* ENGLISH 7⁴, PSYCHOLOGY 8, two options (subject to timetable), Physiology. *Physical Education:* Women—Seasonal sports, Gymnastics and dancing, Advanced coaching; Men—Advanced coaching, Gymnastics and apparatus, Recreational games and sports.

¹ See p 31.

² The selection from the courses in science will be dependent on the science or sciences offered at Grade XIII level. A student entering with Chemistry as part of his Grade XIII programme will take in his first year at the University BIOLOGY 1 and PHYSICS 1. A student entering with Grade XIII standing including two sciences e.g., PHYSICS 1 and CHEMISTRY 1, will take in his first year BIOLOGY 1 and a free option.

³ The weekly period of instruction in Physical Education is 5 hours in each of the first three years.

⁴ ENGLISH 3 and 7 are not compulsory. The candidate may make up a group by offering courses in another subject but care must be taken to provide for a total of three courses in the subject over a period of three years. ECONOMICS 4, POLITICS 2 and Sociology may be offered as a group; BIOLOGY 16, 26 and Anatomy of the fourth year may be offered as a group.

Arts & Theology

4TH YEAR. Specialized study under the direction of The School of Physical and Health Education and The Faculty of Medicine is given in the following subjects. (The number of hours of weekly instruction is shown in parentheses after each subject.) Anatomy (4 hours), Preventive Medicine (2), Evaluation (1), History of Physical education (1), Interpretations and objectives (1), Methods and materials in physical and health education (4), Recreation and playground administration (1), Camping (1), Crafts (2), Training and conditioning (1), Practice teaching and field work (2), Gymnasium practice (3).

Combined Course in Arts and Theology

Queen's University and Queen's Theological College join in offering a Combined Course in Arts and Theology, leading to the Degree of B.A. and the Testamur in Theology. The complete Course covers five years. The first and second years are entirely within the Faculty of Arts and candidates must be fully qualified for admission to this Faculty. The third year consists of one class in Arts, for which a fee of \$50 is charged, and the first year in Theology. The fourth and fifth years of the Combined Course are the second and third years in Theology.

The degree of Bachelor of Arts is awarded at the end of the third year to candidates who have passed in all their subjects and made Grade B in at least half of the classes offered for the B.A. degree. The Testamur in Theology is granted after the successful completion of the fifth year. Additional courses in Theology equivalent to at least one year of further study are required for the degree of Bachelor of Divinity.

COURSES OF INSTRUCTION

1st Year. ENGLISH 2, GREEK 1, HEBREW 1, PHILOSOPHY 1, a science.

2nd Year. GREEK 2, HEBREW 2, three options.

3rd Year. An Arts course, Church History, Systematic Theology, Old Testament Criticism, New Testament Criticism, Practical Theology and Public Speaking.

4th Year. Church History, Systematic Theology, Old Testament Criticism, New Testament Criticism, Practical Theology.

5th Year. Church History, Systematic Theology, Old Testament Criticism, New Testament Criticism, Practical Theology.

Students who offer Greek as one of the subjects on the Secondary School Graduation Diploma may take GREEK 1 in the first year, and a freely chosen class in place of GREEK 2 in the second year. Students whose Grade XIII programme did not include Greek, may offer a second course in Philosophy in place of GREEK 2. In choosing options students must plan to complete three courses in each of two subjects by the end of the third year.

Graduate Courses

MASTER OF ARTS

1. The degree of Master of Arts is awarded in recognition of the satisfactory completion of a Course of intensive study under the direction of one department of the Faculty of Arts. This work includes: (a) Research and thesis; (b) Advanced courses, normally two in number. Graduate students taking courses open also to undergraduates will be required to do additional work in such courses.

The weight of work required is that of a full academic year, of which ordinarily half is represented by the research and thesis. The department may require the candidate to attend certain lectures cognate to the Course of study.

2. A candidate for the degree of Master of Arts must have taken the degree of Bachelor of Arts or its equivalent with first or second class honours. The department concerned may, however, recommend that any application be not accepted.

3. Application for permission to become a candidate for the degree of Master of Arts must be made to the REGISTRAR at least two weeks before the opening of the session. Applicants who are not graduates of Queen's University must send official certificates giving full details of their previous academic training, including courses taken and grades received, together with a marked Calendar showing the content of the courses. All applicants must specify the field in which they desire to carry on their studies.

4. The BOARD OF GRADUATE STUDIES deals with the applications of candidates and the prescriptions of work officially proposed for each.

5. All candidates must take the following final examinations:

(a) Written examinations on all courses prescribed. The minimum standing required in each of these examinations is second class honours.

(b) An oral examination on the subject of the candidate's research. The examination is conducted by at least two members of the department concerned, and at least two other members of the teaching staff of the University not members of the department concerned, to be selected by the department concerned. The chairman of the BOARD OF GRADUATE STUDIES acts as the chairman for the examination or appoints some member of the University teaching staff, not a member of the department concerned, to do so.

6. Each candidate for the Master's degree must submit three typed but unbound copies of his thesis to the REGISTRAR by 20 April if he is a

Graduate Courses

candidate for the degree in the Spring, not less than two weeks before the Oral examination if he wishes to come up for his degree in the Fall.

7. Except by special permission of the BOARD OF GRADUATE STUDIES, candidates are required to do all the work for the Master's degree in residence.

8. The fees charged are outlined on page 46.

DOCTOR OF PHILOSOPHY

Information about requirements for the degree of Doctor of Philosophy may be found in the *Calendar of Graduate Studies*.

Graduate Record Examinations

Queen's University welcomes the submission of Graduate Record Examination scores by any student applying for a scholarship and for admission to graduate work. This examination requires no special preparation. It is intended as an additional measure of the candidate's general preparation. For information regarding the examination, application should be made to GRADUATE RECORD EXAMINATION, BOX 592, PRINCETON, NEW JERSEY. The fee for the examination is \$12.

The Miller Analogies Test

Some universities in the United States require applicants for admission to their graduate schools to take the Miller Analogies Test. Queen's University is a recognized centre for administering this test and arrangements may be made through Professor Blackburn of the Department of Psychology for any student who wishes to take it. The fee is \$1.25.

Courses of Instruction

Art

ANDRÉ BIÉLER, *Resident Artist and Professor*

(On leave of absence, Session 1953-4)

GEORGE SWINTON, B.A., *Assistant Professor*

ART 1, ART 2 and ART 3 are offered in consecutive years and may be counted towards the General B.A. degree either as a group or as individual free options. On recommendation of the departments concerned, students may apply to the Faculty of Arts for permission to combine courses in Fine Art (Art, Music, Drama) to make up a group towards the General B.A. degree.

The aim of the courses is to show that the essential character of each period in history has been given expression through its art.

COURSES OF INSTRUCTION

ART 1. Offered in 1953-4.

Prehistoric art in Europe, Ancient, Classical, Oriental and North American art.

ART 2. Offered in 1954-5.

Early Christian, Romanesque and Gothic art; Renaissance and Baroque art in Italy.

ART 3. Offered in 1955-6.

Renaissance and Post Renaissance art in Northern and Western Europe; Modern art of the nineteenth and twentieth centuries.

STUDIO

In conjunction with the lectures, there is a studio session, where by actual practice, the student studies the different technical aspects of the arts of successive periods.

Text-books: Helen Gardiner, *Art through the Ages*, (3rd edition). For students offering Art as a group—Hugo Beigel Steven, *Art Appreciation* (Day Press).

Lectures—Monday and Thursday, 4.30-5.30

Studio—Tuesday, 3.30-5.30

Bacteriology

G. B. REED, O.B.E., M.A., B.Sc., Ph.D., F.R.S.C., *Professor*

J. H. ORR, M.D., C.M., F.R.C.P.(C), F.R.S.C., *Professor*

E. W. R. CAMPSALL, B.A., M.D., *Demonstrator*

Bacteriology, Biochemistry

Students on the Course in Nursing are required to take BACTERIOLOGY 10. Students on a General Course taking Biology as one of the subjects of concentration may offer BACTERIOLOGY 10 as part of the Biology prescription. Students taking Biology for honours may include BACTERIOLOGY 13 and 14 in their Course. They should consult the head of the department.

COURSES OF INSTRUCTION

BACTERIOLOGY 10. *Introductory Course.*

An introductory course in general and pathogenic bacteriology primarily for nurses and students on the General Course.

Prerequisites—2 courses in BIOLOGY and 2 courses in CHEMISTRY. Text-books: Kelley and Hite, *Microbiology*.

Lectures—Monday and Wednesday at 10

Laboratory—Friday, 1.30-4.30

BACTERIOLOGY 13. *General Medical Bacteriology.*

A systematic study of the disease producing bacteria, infection and immunity. For honours students.

Text-book: Jordan and Burrows, *Bacteriology*.

Lectures—Monday, Wednesday, Friday at 9

Laboratory—Monday & Wednesday, 1.30-4.30, or Tuesday & Thursday, 1.30-4.30

BACTERIOLOGY 14. *Immunology.*

For honours or graduate students. Alternate years; to be offered in 1953-4. Hours to be arranged.

BACTERIOLOGY 15. *The Viruses and Rickettsia.*

For honours and graduate students. Alternate years, not offered in 1953-4. Hours to be arranged.

BACTERIOLOGY 16. *Advanced General Bacteriology.*

For graduate students. Alternate years, to be offered in 1953-4. Hours to be arranged.

BACTERIOLOGY 20. *Research in Bacteriology.*

Biochemistry

J. M. R. BEVERIDGE, B.Sc., Ph.D., M.D., *Craine Professor of Biochemistry*

R. O. HURST, B.A., Ph.D., *Assistant Professor*

THE HONOURS COURSE IN BIOCHEMISTRY

Candidates planning to take the Honours Course in Biochemistry are advised to offer Grade XIII subjects as follows: English, Mathematics (3 papers), French or German, Physics, and Chemistry. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

Students are admitted to the Course in Biochemistry in the third year if they have completed BIOLOGY 1 (*General Biology*), CHEMISTRY 2 (*General Chemistry*), CHEMISTRY 11 (*Analytical Chemistry*), CHEMISTRY 12 (*Organic Chemistry*) with satisfactory standing. The first course in Biochemistry is BIOCHEMISTRY 16. Students must consult the head of the department before registering in any courses in Biochemistry, but they may apply for the Honours course in Biochemistry at the beginning of the second year.

The programme for the degree is as follows:

- (a) BIOLOGY 1—*General Biology*
 16—*Comparative Vertebrate Anatomy*
 PHYSIOLOGY 10—*Animal Physiology*
 MATHEMATICS 2—*Differential and Integral Calculus*
 CHEMISTRY 2—*General Chemistry*
 11—*Analytical Chemistry*
 12—*Organic Chemistry*
 14—*Physical Chemistry*
 22—*Advanced Organic Chemistry*
 BIOCHEMISTRY 16—*General Biochemistry*
 20—*Advanced Biochemistry*
 R1—*Vitamins and Hormones*
 R2—*Enzymology*
 R3—*Problem in Biochemistry*

And one optional course which may be either BACTERIOLOGY 13 (*General Medical Bacteriology*) or BIOLOGY 21 (*Plant Physiology*). If BIOLOGY 21 is selected, BIOLOGY 10 (*General Botany*) must be taken as a prerequisite.

(b) Compulsory general courses to complete the work for the degree: ENGLISH 2, PHILOSOPHY 1 or 5, a language. If the candidate has Grade XIII standing in a language he may take a free option as the third general course. German is advised if the candidate plans to proceed to an advanced degree.

(c) Two general examinations in Biochemistry, one written and one oral.

The work for the Course in Biochemistry requires four years and is normally arranged as follows:

First Year ENGLISH 2, BIOLOGY 1, CHEMISTRY 2, MATHEMATICS 2, PHILOSOPHY 1.

Second Year CHEMISTRY 11, CHEMISTRY 12, BIOLOGY 16, a general course which should be French or German if the student has not completed Grade XIII standing in a language.

Biochemistry

BIOLOGY 10 should be taken in this year if BIOLOGY 21 is to be offered as the option in the third year.

Third Year BIOCHEMISTRY 16, BACTERIOLOGY 13 or BIOLOGY 21, CHEMISTRY 14, CHEMISTRY 22.

Fourth Year BIOCHEMISTRY 20, BIOCHEMISTRY R1, BIOCHEMISTRY R2, BIOCHEMISTRY R3, PHYSIOLOGY 10.

COURSES OF INSTRUCTION

BIOCHEMISTRY 16. *Introduction to Biochemistry.*

This course involves a study of the chemical properties of the components of the diet—proteins, fats, carbohydrates, vitamins, and minerals. The role of each of these components in nutrition is considered together with the processes of digestion, absorption, intermediary metabolism, and excretion. The lectures in this course are combined with those given in BIOCHEMISTRY 18.

Prerequisites—CHEMISTRY 2, 11, 12; BIOLOGY 1. Text-books: West & Todd, *Text Book of Biochemistry* recommended for Honours students in Biochemistry; Mitchell, *Text Book of Biochemistry*; Harrow, *Text Book of Biochemistry*.

Lectures—Monday, Wednesday, Friday at 11; Saturday at 9

Laboratory—Wednesday, or Thursday, 1.30-4.30

A change in hours for lectures and laboratory may be made.

BIOCHEMISTRY 18. *Animal Biochemistry.*

This course is designed for medical students, but graduate students may register for it after consulting the Head of the Department. The general outline is the same as that given for BIOCHEMISTRY 16 but in the second term particular attention is paid to the study of metabolic disturbances, their detection by means of biochemical tests, and the application of these procedures in the practice of medicine.

Prerequisites—CHEMISTRY 2, 11, 12; BIOLOGY 1, 16. Text-books: Kleiner, *Human Biochemistry*; Hawk, Oser & Summerson, *Practical Physiological Chemistry*; Walker Boyd & Asimov, *Biochemistry and Human Metabolism*; Todd & Sanford, *Clinical Diagnosis by Laboratory Methods*.

Lectures—Monday, Wednesday, Friday at 11; Saturday at 9

Laboratory—Wednesday or Thursday, 1.30-4.30

A change in hours for lectures and laboratory may be made.

BIOCHEMISTRY 20. *Advanced Biochemistry.*

An intensive study of selected topics in biochemistry to be chosen at the discretion of the staff and including some of the following subjects: nucleic acids and nucleoproteins; protein chemistry; metabolism of proteins, carbohydrates and fats; steroids; carbon dioxide and oxygen transport; biological oxidation and chemical energetics. Text-books: West & Todd, *Text Book of Biochemistry*; Gortner & Gortner, *Outlines of Biochemistry*; Baldwin, *Dynamic Aspects of Biochemistry*.

Lectures—Wednesday and Friday at 9

Laboratory—Monday 9.00-12.00

A change in hours for lectures and laboratory may be made.

Reading Courses

BIOCHEMISTRY R1. *Vitamins and Hormones.*

The section on vitamins is covered during the first term and involves assigned reading on the general field of vitamins and the preparation of two essays each of 4000-5000 words on special topics. Recent reviews and the more important original papers must be consulted in the preparation of these manuscripts. The student is required to present the subject matter of one of the essays in the form of a 35-45 minute talk before a seminar group. The section on hormones is covered during the second term and the subject may be introduced by a few lectures. The remainder of the material is handled as described for the section on vitamins.

BIOCHEMISTRY R2. *Enzymology.*

Reading assignments on the general field of enzymology are given at intervals throughout the year. The student is required to prepare two essays, each of about 4000-5000 words, and to present the material in the form of a 35-45 minute talk before a seminar group. Recent reviews and the more important original papers must be consulted in the preparation of these manuscripts. The student is advised to audit the graduate lecture course in enzymology.

BIOCHEMISTRY R3. *Problem in Biochemistry.*

Each student will be assigned a problem in biochemistry on which he must work at least two afternoons a week in the laboratory. A written report concerning the study must be presented at the end of the term.

Graduate Work

Candidates interested in graduate work should consult the HEAD OF THE DEPARTMENT OF BIOCHEMISTRY.

Biology

R. O. EARL, E.D., B.A., S.M., Ph.D., *The John Roberts Allan*
Professor of Biology

G. KROTKOV, B.S.A., M.A., Ph.D., F.R.S.C., *Professor*

A. S. WEST, B.Sc., Ph.D., *Professor*

H. W. CURRAN, B.S., M.A., Ph.D., *Professor*

H. M. GOOD, B.A., Ph.D., *Assistant Professor*

J. R. W. VALLENTYNE, B.A., *Lecturer under the R. Samuel*
McLaughlin Trust Fund

J. F. BENDELL, B.A., *Lecturer*

Grade XIII standing in Biology or BIOLOGY 1 is prerequisite to all other courses in this department.

Candidates offering Biology as one of the subjects of concentration on the General Course take BIOLOGY 1 (*General Biology*), BIOLOGY 10

Biology

(*General Botany*), BIOLOGY 16 (*Comparative vertebrate anatomy*), if they have not included Biology in their Grade XIII programme; BIOLOGY 10, 16, BACTERIOLOGY 10 (*Introductory bacteriology*) or a third course in Biology selected on the advice of the department, if they have offered Biology of Grade XIII as one of the subjects for admission.

THE HONOURS COURSE IN BIOLOGY

Candidates planning to take the Honours Course in Biology are advised to offer Grade XIII subjects as follows: English, Mathematics (3 papers), Biology (Botany and Zoology), a language, and a fifth subject which should be Chemistry or Physics. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

The programme for the degree is as follows:

(a) The Major.

COURSE FOR TEACHERS

- BIOLOGY 10—*General Botany*
11—*Phanerogamic Botany*
12—*Cryptogamic Botany*
16—*Comparative Vertebrate Anatomy*
17—*Invertebrate Zoology*
18—*Entomology* or
19—*Economic Vertebrate Zoology*
45—*Evolution and Genetics*

With PHYSICS 2—*Light, Electricity and Magnetism* or one other course in biology.

- BIOLOGY R1—*Biological Theories*
R2—*General Physiology*
R3—*Morphogenesis* or
R4—*Advanced Entomology*

COURSE FOR BOTANISTS

- BIOLOGY 10—*General Botany*
11—*Phanerogamic Botany*
12—*Cryptogamic Botany*
13—*Plant Pathology*
21—*Plant Physiology*
31—*Plant Ecology*
45—*Evolution and Genetics*

With PHYSICS 2—*Light, Electricity and Magnetism* or a course in zoology

BIOLOGY R1—*Biological Theories*

R2—*General Physiology*

R3—*Morphogenesis*

BACTERIOLOGY 10—*Introductory Bacteriology* may be substituted for BIOLOGY 13.

COURSE FOR ZOOLOGISTS

BIOLOGY 16—*Comparative Vertebrate Anatomy*

17—*Invertebrate Zoology*

18—*Entomology*

19—*Economic Vertebrate Zoology* or

20—*Histology and Embryology* or

36—*Animal Ecology*

45—*Evolution and Genetics*

With BACTERIOLOGY 10 (*Introductory Bacteriology*), PHYSIOLOGY 10 (*Animal Physiology*) and PHYSICS 2 (*Light, Electricity and Magnetism*) or a course in botany

BIOLOGY R1—*Biological Theories*

R2—*General Physiology*

R3—*Morphogenesis* or

R4—*Advanced Entomology*

For the Interim High School Assistant's Certificate, Type A, in Science at the Ontario College of Education, PHYSICS 2 is required.

(b) The Minor

CHEMISTRY 1—*General Chemistry*, unless the candidate has Grade XIII standing in Chemistry

2—*General Chemistry*

12—*Organic Chemistry*

BIOCHEMISTRY 16—*General Biochemistry*

PHYSICS 1—*Mechanics, properties of matter, heat, wave motion, sound, light, electricity, and magnetism*

(c) Compulsory general courses to complete the work for degree:

ENGLISH 2, PHILOSOPHY 1 or 5, a language. If the candidate has Grade XIII standing in a language he may take a free option as the third general course.

(d) Two general examinations in Biology.

For information about the General Honours Course in Science for Teachers and the Course of study leading to the Interim High School Assistant's Certificate, Type A, in Science at the Ontario College of Education see page 90. For information about scholarships see pages 57, 58.

Biology

When Biology is the minor associated with Chemistry as major, the minor consists of BIOLOGY 10 (*General botany*), BIOLOGY 16 (*Comparative Vertebrate Anatomy*) or BIOLOGY 17 (*Invertebrate Zoology*), BIOLOGY 21 (*Plant Physiology*) or PHYSIOLOGY 10 (*Animal Physiology*), and a fourth course in Biology selected in consultation with the department.

When Biology is the minor associated with Physics as major, the minor consists of BIOLOGY 10 (*General Botany*), BIOLOGY 16 (*Comparative Vertebrate Anatomy*), PHYSIOLOGY 10 (*Animal Physiology*) and BIOLOGY 21 (*Plant Physiology*) and PHYSIOLOGY 10 (*Animal Physiology*).

When Biology is the minor associated with PSYCHOLOGY as major, the minor consists of four courses, including BIOLOGY 16 (*Comparative Vertebrate Anatomy*), PHYSIOLOGY 10 (*Animal Physiology*) and BIOLOGY 45 (*Evolution and Genetics*).

COURSES OF INSTRUCTION

BIOLOGY 1. *General Biology*.

A scientific study of plants and animals. The subject is treated in a comprehensive way with emphasis upon generalizations and principles. Laboratory study of examples.

Text-book: Mavor, *General Biology* (Macmillan).

Lectures—Monday, Wednesday, Friday at 8

Laboratory—Monday or Wednesday, 1.30-3.30

Professor EARL, Mr VALLENTYNE

BIOLOGY 10. *General Botany*.

The fundamental facts and principles of plant life. A careful study of form, structure and reproduction of representatives of the principal groups. Attention is given to life processes, particularly in the higher plants.

Prerequisite: BIOLOGY 1. Text-book: Fuller & Tippe, *College Botany* (Holt).

Lectures—Tuesday and Thursday at 9

Laboratory—Tuesday, 1.30-4.30

Professor KROTKOV

BIOLOGY 11. *Phanerogamic Botany*.

Taxonomy, morphology, life histories and evolution of seed plants. Special attention is given to representatives of the local flora. *Offered in 1954-5 but not in 1953-4.*

Prerequisite—BIOLOGY 10. Text-book: McLean & Ivimey-Cook, *Textbook of Theoretical Botany* (Longmans, Green).

Lectures—Tuesday and Thursday at 11

Laboratory—Thursday, 1.30-4.30

Professor EARL

BIOLOGY 12. *Cryptogamic Botany*

The lower plants treated as described for the seed plants in BIOLOGY 11. *Offered in 1953-4 but not in 1954-5.*

Prerequisite—BIOLOGY 10. Text-book: McLean & Ivimey-Cook, *Textbook of Theoretical Botany* (Longmans, Green).

Lectures—Tuesday and Thursday at 11

Laboratory—Hours to be arranged

Professor GOOD

BIOLOGY 13. *Plant Pathology.*

A study of representative bacterial, fungous, and virus diseases of plants, with emphasis on host-parasite relations, and the influence of environment on disease development. *Offered in 1954-5, but not in 1953-4.*

Prerequisite—BIOLOGY 10. Text-book: Heald, *Introduction to Plant Pathology* (McGraw-Hill).
Professor GOOD

BIOLOGY 16. *Comparative Vertebrate Anatomy.*

A course dealing with evolution of body form and organ systems in the Phylum Chordata. Special attention is given to the study of Mammalian Anatomy.

Prerequisite—BIOLOGY 1. Text-books: Romer, *The Vertebrate Body* (Saunders); Newman, *The Phylum Chordata* (Macmillan); Breland, *Manual of Comparative Anatomy* (McGraw-Hill).

Lectures—Tuesday and Thursday at 10

Laboratory—Monday or Wednesday 1.30-4.30

Mr BENDELL

BIOLOGY 17. *Invertebrate Zoology.*

A survey of representatives of the more important groups of invertebrates with reference to anatomy, taxonomy and life histories. Particular emphasis is given to phylogeny, and attention is directed to those forms which are of importance to man.

Prerequisite—BIOLOGY 1, or equivalent. Text-books: Bullough, *Practical Invertebrate Anatomy* (Macmillan); Buschbaum, *Animals without Backbones* (Penguin).

Lectures—Tuesday and Thursday at 11

Laboratory—Wednesday, 1.30-4.30

Professor WEST

BIOLOGY 18. *Entomology*

A survey of insects: morphology and internal anatomy, physiology and ecology, life history, habits and control of representatives of the more important orders and families. Particular emphasis is given to structure in relation to function and to the relation of the organism to its environment.

Prerequisite—BIOLOGY 17 (Grade B). May be limited to honours students in Biology. Text-books: Essig, *College Entomology* (Macmillan); Ross, *A Text-book of Entomology* (Wiley); Metcalf & Metcalf, *A Key to the Principal Orders and Families of Insects*.

Lectures—Tuesday and Thursday at 10

Laboratory—Tuesday, 1.30-4.30

Professor WEST

BIOLOGY 19. *Economic Vertebrate Zoology.*

A study of the more important vertebrate animals from an economic aspect such as commercial and game fishes, migratory waterfowl and game birds, significant fur-bearing animals. Emphasis is placed on conservation methods.

Prerequisite—BIOLOGY 16 (Grade B).

Lectures—Monday and Wednesday at 9

Laboratory—Friday, 1.30-4.30

Professor CURRAN

BIOLOGY 20. *Histology and Embryology.*

The course is taken with the students in the Faculty of Medicine. The course combines a study in microscopy of the principal tissues and organs of the adult, with a study of the origin and development of those structures. Embryological changes from fertilization through cleavage and organogeny to establishment of

Biology

the vertebrate and mammalian body form are considered in detail. Study material consists of fresh preparations and prepared slides.

Prerequisite—BIOLOGY 16. Text-books: Ham, *Histology*; Maximow & Bloom, *Textbook of Histology*; Patten, *Human Embryology*; Hamilton, Boyd & Mossman, *Human Embryology*; Huettnner, *Fundamentals of Comparative Embryology of the Vertebrates*.

Lectures—Monday, Wednesday and Friday at 11

Laboratory—Tuesday 9-11 and Thursday 10-12, or Wednesday and Friday 9-11

Professor KROPP

BIOLOGY 21. *Plant Physiology*.

A general study of the following topics: carbon and nitrogen metabolism, respiration, nutrition, permeability, water-relations and growth.

Prerequisites—BIOLOGY 10, CHEMISTRY 12. Text-book: Meyer & Anderson, *Plant Physiology* (Van Nostrand).

Lectures—Tuesday and Thursday at 8

Laboratory—Hours to be arranged

Professor KROTKOV

BIOLOGY 31. *Plant Ecology*.

A study of the origin and development of plant associations in relation to environment. The relations of plants to latitude, altitude, climate, and other distributive factors. Ecological anatomy. Laboratory and field work. *Offered in 1953-4, but not in 1954-5*.

Prerequisite—BIOLOGY 10. Text-books: Weaver & Clements, *Plant Ecology*, 2nd edition (McGraw-Hill); James, *A Geography of Man* (Ginn).

Lectures—Tuesday, and Thursday at 11

Laboratory—Thursday, 1.30-4.30

Professor EARL

BIOLOGY 36. *Animal Ecology*.

A study of the following topics: populations, behaviour, environmental physiology, paleoecology, the energetics of the earth.

Prerequisites—BIOLOGY 16, 17; CHEMISTRY 2. Text-book: Elton, *Animal Ecology* (Macmillan).

Lectures—Wednesday and Friday at 10

Laboratory—Hours to be arranged

Mr VALLENTYNE

BIOLOGY 45. *Genetics*.

The principles of genetics; exercises on variation and heredity in plants and animals; genetics and evolution.

Text-book: Sinnott, Dunn, Dobzhansky, *Principles of Genetics* (McGraw-Hill).

Lectures—Monday, Wednesday, Friday at 11

Mr BENDELL

Reading Courses

BIOLOGY R1. *Biological Theories*.

Shull, *Evolution* (McGraw-Hill); Darwin, *On the Origin of Species*; Singer, *A Short History of Biology* (Oxford); Bertalanffy, *Problems of Life* (Wiley); Knobloch, *Readings in Biological Science* (Appleton Century Crofts).

Professor EARL

BIOLOGY R2. *General Physiology*.

L. V. Heilbrun, *An Outline of General Physiology* (Saunders Co.); B. T. Scheer, *Comparative Physiology* (John Wiley and Sons); N. A. Maximov, *Plant Physiology* (McGraw-Hill).
Professor KROTKOV

BIOLOGY R3. *Morphogenesis*.

Thompson, *On Growth and Form* (Cambridge); Bonner, *Morphogenesis* (Princeton). A list of supplementary review articles may be obtained from the instructor.
Mr VALLENTYNE

BIOLOGY R4. *Entomology*.

A list of reading material may be obtained from the instructor. Several options are available. With the approval of the department this course may be substituted for BIOLOGY R3.

With the consent of the department, a thesis may be substituted for either BIOLOGY R2 or R3 but not for R1. Application for permission to do this must be made to the department within two weeks of the opening of the fall term.

Professor WEST

GRADUATE COURSES

For information about graduate courses in Biology, see the *Calendar of Graduate Studies*.

Chemistry

J. A. McRAE, M.A., D.Sc., F.R.I.C., F.R.S.C., *Professor*

G. B. FROST, B.A., Ph.D., *Professor*

L. A. MUNRO, M.A., Ph.D., F.R.S.C., F.C.I.C., *Professor*

R. L. DORRANCE, M.A., *Associate Professor*

W. M. SMITH, B.Sc., Ph.D., *Associate Professor*

R. Y. MOIR, M.A., Ph.D., *Associate Professor*

J. W. R. WEED, B.Sc., *Milton Hersey Fellow*

J. W. S. JAMIESON, B.Sc., *William Neish Fellow*

Grade XIII standing in Chemistry or CHEMISTRY 1 is required for admission to CHEMISTRY 2, and CHEMISTRY 2 is prerequisite to all other courses in Chemistry. Candidates should not attempt CHEMISTRY 1 unless they have taken Junior Matriculation Chemistry.

Candidates offering Chemistry as one of the subjects of concentration on the General Course take CHEMISTRY 1 (*General Chemistry*), CHEMISTRY 2 (*General Chemistry*), CHEMISTRY 11 (*Analytical Chemistry*), if they have not included Chemistry in their Grade XIII programme; CHEMISTRY 2, 11, 12 (*Organic Chemistry*), if they have offered Chemistry of Grade XIII as one of the subjects for admission. Candidates for the General B.A. degree are not ordinarily admitted to honours courses other than CHEMISTRY 11 and 12 but exceptions may be made if they have satisfactory standing in CHEMISTRY 2, 11 and 12.

Chemistry

THE HONOURS COURSE IN CHEMISTRY

Candidates planning to take the Honours Course in Chemistry are advised to offer Grade XIII subjects as follows: English, Mathematics (3 papers), Chemistry, a language and a fifth subject which should be Physics. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

The programme for the degree is as follows:

(a) The Major

For the students registered in honours prior to the session of 1950-1 the prescription for the honours major in the 1949-50 calendar will apply.

CHEMISTRY 2—*General Chemistry*
11—*Analytical Chemistry*
12—*Organic Chemistry*
13—*Quantitative Analysis*
14—*Physical Chemistry*
22—*Advanced Organic Chemistry*
24—*Advanced Physical Chemistry*; or
25—*Electrochemistry*

One of CHEMISTRY 17—*Industrial Chemistry*
15A—*Colloid Chemistry*
21B—*Surface Chemistry*

CHEMISTRY 24 or 25, whichever has not already been chosen
MATHEMATICS 2—*Differential and Integral Calculus*

CHEMISTRY R1—*Inorganic Chemistry*; and one additional reading course

BIOCHEMISTRY 16—*Introduction to Biochemistry*; or
18—*Animal Biochemistry* may be substituted for CHEMISTRY 17

(b) The Minor

PHYSICS 2, 11, 13B, 14A; MATHEMATICS 10A, 11B or 13. If Physics has not been included in the Grade XIII programme the candidate must complete PHYSICS 1 before registering in PHYSICS 2, or BIOLOGY 10, 16, 21, or 26; a fourth course in Biology selected after consultation with the department of Biology; and PHYSICS 1 unless Physics has been taken as one of the subjects of Grade XIII, or

GEOLOGY 1, 2, 11, 14, 12 or 10A, and 13B.

(c) Compulsory general courses to complete the work for degree. With Physics or Biology as minor: ENGLISH 2, PHILOSOPHY 1 or 5, a language.

If the candidate has Grade XIII standing in a language he may take an option in place of the third general course. With the Geological Sciences as minor: ENGLISH 2, PHILOSOPHY 1 or 5.

(d) Two general examinations in Chemistry.

When Chemistry is the minor associated with Biology as major, the minor consists of CHEMISTRY 2 (*General Chemistry*), CHEMISTRY 12 (*Organic Chemistry*), BIOCHEMISTRY 16 (*Introduction to Biochemistry*), and PHYSICS 1 (*Mechanics, properties of matter, heat, wave-motion, sound, light, electricity, and magnetism*) unless Physics has been offered as a subject of Grade XIII. When Chemistry is the minor associated with Geological Sciences as major, the minor consists of CHEMISTRY 2, 11, 13, 14.

Students taking Honours in Chemistry must consult the Head of the Department after they have passed CHEMISTRY 2.

Students taking Chemistry as the major are advised to include German in their Course. This is of particular importance to those who plan to proceed to graduate work.

For information about the General Honours Course in Science for Teachers and the course of study leading to the Interim High School Assistant's Certificate, Type A, in Science at the Ontario College of Education, see page 90. For information about scholarships in Chemistry, see pages 58 and 59.

COURSES OF INSTRUCTION

CHEMISTRY 1. *General Chemistry.*

The fundamental theories, laws and principles of chemistry are discussed and applied in the study of the principal non-metals and some of the more important metals and their compounds.

The students entering on this course should already have passed Junior Matriculation Chemistry.

Text-books to be announced.

Lectures—Tuesday, Thursday, Saturday at 10

Laboratory—Thursday, 1.30-3.30

Professor MOIR

CHEMISTRY 2. *General Chemistry.*

The laws and theories of chemistry with particular attention to both their qualitative and quantitative applications. The chemistry of the principal non-metals and metals and their more important classes of compounds. In the laboratory numerous illustrative quantitative and qualitative exercises will be performed. The student will be expected to work each week a set of assigned problems.

A more detailed and advanced course in general chemistry than CHEMISTRY 1. It will be open only to those who have passed CHEMISTRY 1 or who have standing in Grade XIII Chemistry or its equivalent.

Chemistry

Text-books: Sisler, Vander Werf, Davidson, *General Chemistry* (Macmillan); Morton, Clippenger, Eblen, *A Laboratory Program for General Chemistry* (Houghton-Mifflin); Dorrance, *Experiments and Problems in General Chemistry* (Technical Supplies).

Lectures—Wednesday, Friday at 10; Thursday at 1.30

Laboratory—Thursday, 2.30-4.30

Professor SMITH

CHEMISTRY 11. *Analytical Chemistry.*

Qualitative Analysis. The lectures deal with the chemistry of the metals and the theory of qualitative analysis. The laboratory work consists of the systematic analysis for basic and acid ions leading to the analysis of selected industrial products.

Open to general students who have passed CHEMISTRY 2.

Text-book: Curtman, *Semimicro Qualitative Analysis* (Macmillan). Reference Texts: Treadwell & Hall, *Analytical Chemistry*. Vol. I (Wiley); Engelder, *Calculations of Qualitative Analysis* (Wiley).

Lectures—Tuesday at 11

Laboratory—Wednesday, 1.30-4.30

Professor MUNRO

CHEMISTRY 11B. *Analytical Chemistry.*

Quantitative Analysis. An elementary course designed to illustrate the fundamental procedures in gravimetric and volumetric analysis.

Open to general students who have passed CHEMISTRY 2.

Text-book: Dorrance, *Procedures and Problems in Quantitative Analysis* (Technical Supplies).

Lectures—Thursday at 11

Laboratory—Thursday, 1.30-4.30

Professor DORRANCE

CHEMISTRY 12. *Organic Chemistry.*

An introductory course on the chemistry of the compounds of carbon. The principal classes of aliphatic and aromatic compounds are studied to illustrate both their theoretical and practical importance. In the laboratory a number of organic compounds is prepared to illustrate typical operations employed in organic chemistry.

Prerequisite—CHEMISTRY 2 with a minimum of 62 per cent, or CHEMISTRY 2 and 11. Students in Biology and Biochemistry taking Chemistry as minor may take CHEMISTRY 11 and 12 in the same year. Text-books: Lecture text-book to be announced; Adams & Johnson, *Laboratory Experiments in Organic Chemistry*, 4th edition (Macmillan).

Lectures—Wednesday and Friday at 11

Laboratory—Monday 1.30-4.30, or Tuesday 1.30-4.30, or Friday 1.30-4.30

Professor McRAE

CHEMISTRY 13. *Quantitative Analysis—Honours Course.*

An extended course in Quantitative Analysis.

General students may take CHEMISTRY 13 if they have at least 62 per cent in CHEMISTRY 11. Text-book: Vogel, *A Textbook of Quantitative Inorganic Analysis* (Longmans).

Lectures—Monday at 8

Laboratory—6 hours per week to be arranged

Professors DORRANCE and SMITH

CHEMISTRY 14. *Physical Chemistry.*

The ideal gas law; actual gases and equations of state; the liquid state and vapor pressure; the ideal solution; deviations from ideality, azeotropes, fractionation; dilute solutions; the nature of ionic crystals and electrolytic solutions; thermodynamic functions, energy, enthalpy, entropy and free energy; the equilibrium constant; heterogeneous equilibria; rates of chemical processes.

Prerequisites—CHEMISTRY 1, 2, 11, 13 and MATHEMATICS 2. CHEMISTRY 13 and 14 may be taken in the same year. Text-book: Glasstone, *Elements of Physical Chemistry* (Van Nostrand).

Lectures—Tuesday and Thursday at 9

Laboratory—Tuesday, 1.30-4.30

Professor FROST

CHEMISTRY 15A. *Colloid Chemistry.*

The lectures deal with the general properties of colloids. The laboratory work is illustrative of the topics dealt with in lectures and includes experiments on colloidal preparations, dialysis, pore size of membranes, relative and intrinsic viscosity, surface tension, molecular films, electrical properties, adsorption, foams, emulsions, gels, etc.

Prerequisites—PHYSICS 1 and CHEMISTRY 1, 2, 11, 12, 13, and 14. Text-book: Hartman, *Colloid Chemistry*, (Houghton-Mifflin). Reference texts: Alexander, *Colloid Chemistry*, Vols. I-VII (Chem. Catalogue Co.); Lewis, Squires & Broughton, *Colloidal and Amorphous Materials* (Macmillan).

Lectures—Wednesday and Friday at 10, first term

Laboratory—Tuesday, 1.30-4.30

Professor MUNRO

CHEMISTRY 17. *Industrial Chemistry.*

The lectures deal with the following topics: the characteristics and production of solid, liquid, and gaseous fuels; water purification and treatment; the petroleum industry: sulphuric, nitric and hydrochloric acids; fertilizers; alkali; artificial fibres and the manufacture of wood pulp and paper. In the laboratory the following processes are carried out: the catalytic production of sulphuric acid, nitric acid and formaldehyde; the determination of the composition and calorific value of fuels; water treatment and analysis and gas analysis. Emphasis is laid on the systematic recording and interpreting of results throughout the course.

Prerequisites—CHEMISTRY 1, 2, 11, 12, 13 and PHYSICS 1. CHEMISTRY 17 and 12 or 13 or both may be taken in the same year. Text-book: Shreve, *Chemical Process Industries* (McGraw-Hill).

Lectures—Tuesday and Thursday at 10, in Gordon Hall

Laboratory—Monday, 1.30-4.30, in Gordon Hall

Department of Chemical Engineering

CHEMISTRY 21B. *Surface Chemistry.*

This course is designed to continue the work begun in CHEMISTRY 15A. It is devoted to the study of polymerization, gels, thermo-plastic and thermo-setting resins, ion exchange, elastomers, sorption, and catalysis.

Prerequisite—CHEMISTRY 15A. Text-books: Powers, *Synthetic Resins and Rubbers* (Wiley); Griffith, *The Mechanism of Contact Catalysis* (Oxford University Press); Gregg, *Adsorption* (Methuen and Co.). Reference Texts: *Modern Plastics Encyclopedia* (Plastics Corp.); Berkman, Morell & Egloff, *Catalysis* (Reinhold Corp.); *Advances in Colloid Science* (Interscience).

Lectures—Monday, Wednesday, Friday at 11

Professor MUNRO

Chemistry

CHEMISTRY 22. *Advanced Organic Chemistry.*

The principal reactions used in synthetic organic chemistry with practical illustrations in the laboratory. The more detailed chemistry of the aliphatic and aromatic series of the simpler types of heterocyclic compounds. Laboratory practice in qualitative and quantitative organic chemistry and organic preparations.

Prerequisites—CHEMISTRY 1, 2, 11, 12, 13, 14; but CHEMISTRY 22 and CHEMISTRY 14 may be taken in the same year. Text-books: Fieser & Fieser, *Organic Chemistry* (Heath); Adams & Johnson, *Laboratory Experiments in Organic Chemistry* (Macmillan). Books of Reference: Whitmore, *Organic Chemistry* (Van Nostrand); Karrer, *Organic Chemistry*; Gilman, *Organic Chemistry* (Wiley); Gattermann-Wieland, *Laboratory Methods of Organic Chemistry* (Macmillan).

Lectures—Tuesday and Thursday at 11

Laboratory—Monday 1.30-4.30, or Tuesday 1.30-4.30, or Friday 1.30-4.30 or Saturday 9-12

Professor McRAE

CHEMISTRY 24. *Advanced Physical Chemistry.*

The greater part of this course is taken up with a detailed treatment of the principles of chemical thermodynamics and their application to the chemical processes. Some consideration, however, is given to the kinetic approach to chemical phenomena, and to molecular structure. The laboratory work consists of equilibrium and rate studies. Several laboratory periods are used for the mathematical computation of fugacities, activities, and free energies, and for the thermodynamic calculation of yields in industrial processes.

Prerequisites—CHEMISTRY 1, 2, 11, 12, 13, 14. Text-book: Glasstone, *Thermodynamics* (Van Nostrand).

Lectures—Tuesday and Thursday at 10

Laboratory—Thursday, 1.30-4.30

Professor FROST

CHEMISTRY 25. *Electrochemistry.*

A discussion of the fundamentals of electrochemistry and their application to chemical analysis. The laboratory work includes electrolytic preparations, electrical measurements of the properties of solutions and electrometric titrations.

Prerequisites—CHEMISTRY 1, 2, 11, 12, 13, 14. Text-book: Glasstone, *Introduction to Electrochemistry* (Van Nostrand).

Lectures—Monday at 10, Tuesday at 8 (first term); Thursday at 8 (second term)

Laboratory—Wednesday, 1.30-4.30

Professor SMITH

Reading Courses

CHEMISTRY R1. *Descriptive and Theoretical Inorganic Chemistry.*

Text-book: to be assigned.

Professor SMITH

CHEMISTRY R2. *Chemical Calculations.*

Students taking this course should consult the instructor for assignment of books.

This course presupposes that the student has passed MATHEMATICS 2.

Professor DORRANCE

CHEMISTRY R3. *History of Chemistry.*

A course of selected reading in the history of chemistry, and the development of

Chemistry, Classics

chemical theory. Students should consult the instructor for assignment of books and journal articles. Professor FROST

CHEMISTRY R5. *Industrial Chemistry*.

CHEMISTRY R5 and CHEMISTRY 17 may not be counted towards the major in Chemistry.

Text-book: Shreve, *Chemical Process Industries*.

Professor MCRAE

GRADUATE COURSES

For information about graduate courses in Chemistry, see the *Calendar of Graduate Studies*.

Classics

H. L. TRACY, B.A., Ph.D., *Professor*

S. E. SMETHURST, M.A., *Professor*

MARY L. MACDONNELL, M.A., *Assistant Professor*

GRACE ABRAMS, ELIZABETH O'NEILL,

KENNETH THOMPSON, *Tutors Session 1952-3*.

CLASSICAL LITERATURE

COURSE OF INSTRUCTION

CLASSICAL LITERATURE 1.

A general course open to those who wish to study in English translations the literature of Greece and Rome.

Prescribed Texts: Homer, *Iliad and Odyssey*, E. V. Rieu (Penguin Books); *Seven Famous Greek Plays*, Oates and O'Neill (Modern Library). Reference Books: 1. MYTHOLOGY: Bianchi, *The Mythology of Greece and Rome*; Bullfinch, *Mythology*. 2. EPIC: Vergil, *Aeneid*, Mackail. 3. DRAMA: Plautus (Loeb, vol. 2). 4. SATIRE: Herodas, Juvenal (Loeb). 5. ROMANCES: Longus, Achilles Tatius (Loeb). 6. BIOGRAPHY: *Socratic Discourses* (Everyman); Plutarch, *Lives* (Everyman, vol. 3); Suetonius (Loeb). 7. LITERARY CRITICISM: Horace, *Satires, etc.* (Loeb); *Aristotle on the Art of Poetry*, Cooper (Harcourt, Brace and Co.). 8. GENERAL: *History of Ancient Greek Literature*, Murray; *Latin Literature*, Mackail. Reference books are available to extramural students through the university library.

Lectures—Tuesday, Thursday, Saturday at 9

Professor TRACY

For information about scholarships, see page 49.

GREEK LANGUAGE AND LITERATURE

Liddell and Scott's *Greek Dictionary* (abridged edition) is recommended. A *Greek Grammar*, preferably that of Goodwin and Gulick, or Smyth, is necessary.

Classics: Greek

GREEK A may be counted towards a degree under conditions specified in sections 8 and 9, GENERAL REGULATIONS. Under these regulations students who enter the University without matriculation in Greek, and who wish to specialize in this subject, may complete their programme of work in the usual time.

Students offering Greek as one of the subjects of concentration on the General Course will take either (a) GREEK A, GREEK 1 and 2, or GREEK 1, 2, and one of GREEK 10, 11; or (b) courses in classical civilization, three of CLASSICAL LITERATURE 1, ANCIENT HISTORY 4, 51, HISTORY 12 (*Mediaeval Europe, 400-1453*).

THE HONOURS COURSE IN GREEK

Candidates planning to take the Honours Course in Greek are advised to offer Grade XIII subjects as follows: English, Latin, Greek, a science, and a fifth subject which may be a third language, a second science or History. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include any subjects that they lack.

The programme for the degree is as follows:

(a) The Major

- GREEK 2—*Translation and Prose Composition*
- 10—*Epic Poetry, Oratory*
- 11—*Historians, Comedy*
- 21—*Tragedy, Minor Dialogues of Plato*
- 26—*History of Ancient Philosophy*

ANCIENT HISTORY 4—*A Survey of Greek and Roman Society*

With LATIN 12 (*Vergil*) and ANCIENT HISTORY 51 (*Advanced Greek and Roman History*) if Latin is the minor; LATIN 2 (*Translation and Prose Composition*) and POLITICS 2 (*Introduction to Government and Politics*) if Philosophy is the minor.

Reading Courses

- CLASSICS R1—*Greek and Roman Literature*, and topics selected from religion, art, social life; and
- CLASSICS R2—*Life and Letters in the Early Empire*; or
- CLASSICS R3—*Classical Tragedy*; and
- CLASSICS R4—*The Odyssey of Homer*.

GREEK 2 and 10 (or 11) should be taken in the same session. CLASSICS R1 should be taken as the first reading course, and as early as possible.

(b) The Minor

LATIN 2, 12 or 13, 20, and 30; or

PHILOSOPHY 1, 10, 27 and two advanced courses. (See page)

In consultation with the Department of Classics a candidate may take the minor in some other subject.

(c) Compulsory general courses to complete the work for the degree. With Latin as minor: ENGLISH 2, PHILOSOPHY 1, a science. If the candidate has Grade XIII standing in a science he may take a free option as the third general course. With Philosophy as minor: ENGLISH 2, a science. If the candidate has Grade XIII standing in a science he may take a free option as the second general course.

(d) Two general examinations in Greek.

A minor in Greek normally consists of GREEK 2, 10, 11, and 21; or, when Latin is not the major, ANCIENT HISTORY 4.

Candidates for admission to the course of study leading to the Interim High School Assistant's Certificate, Type A, in Classics at the Ontario College of Education take the regular Honours degree Course in Latin and Greek, or Greek and Latin.

For information about scholarships in Greek see page 49.

COURSES OF INSTRUCTION

GREEK A. For Beginners.

Text-books: Alston Chase & Henry Philips, Jr., *A New Introduction to Greek* (Technical Supplies); Goodwin & Gulick, *Greek Grammar* (Ginn).

Lectures—Monday at 1.30; Tuesday, Thursday, Saturday at 9

Professor MACDONNELL

GREEK 1. Translation and Prose Composition.

Text-books: Freeman & Lowe, *Greek Reader*, (Oxford, Clarendon Press); Page, *The Acts of the Apostles*, (Macmillan); North & Hillard, *Greek Prose Composition*, (Rivington's).

Lectures—Monday, Wednesday, Friday at 11

Professor SMETHURST

GREEK 2. Translation and Prose Composition.

Text-books: Euripides, *Alcestis*, Earle (Macmillan); Plato, *Apology*, Stock (Oxford Clarendon Press); *The Acts of the Apostles*, Page (Macmillan).

Hours to be arranged

Professor TRACY

GREEK 10. Epic Poetry, Oratory.

Text-books: Demosthenes, *Olynthiacs*, Abbott and Matheson (Oxford, Clarendon Press); Lysias, *XVI Orations*, Shuckburgh (Macmillan); *Isocrates* (text to be arranged); Homer, *Iliad I-XII*, Merry (Oxford, Clarendon Press); Goodwin and Gulick, *Greek Grammar* (Ginn).

Hours to arranged

Professors MACDONNELL and TRACY

Classics

GREEK 11. *Historians, Comedy.*

Text-books: Thucydides, Books I and II, Marchant (Macmillan); Aristophanes, *Acharnians*, and *Clouds*, Merry (Oxford, Clarendon Press). *Not offered in 1953-4.*

GREEK 21. *Tragedy, Minor Dialogues of Plato.*

Text-books: Sophocles, *Antigone*, Jebb (abridged edition; Cambridge, Pitt Press). A prescription of reading from Plato will be arranged.

Hours to be arranged.

Professors TRACY and SMETHURST

GREEK 26.

A history of ancient philosophy and the development of modern thought. This course is for the current session the same as PHILOSOPHY 12 and will be given by the Department of Philosophy.

Prerequisite—PHILOSOPHY 1

Reading Courses

Students are urged to cover as much as possible of their reading courses during the long vacation.

CLASSICS R1. *Greek and Roman Literature, and Topics selected from Religion, Art, Social Life.*

All students must prepare themselves in Greek and Latin Literature. One or two additional topics are to be chosen. A full bibliography cannot be given here. The basic books in the various fields are listed; others will be recommended to students when they have chosen their special topics. Literature: Croiset, *Abridged History of Greek Literature*; Mackail, *Latin Literature*. Religion: Moore, *The Religious Thought of the Greeks*; Bailey, *Phases in the Religion of Ancient Rome*. Art: P. Gardner, *Principles of Greek Art*; Walters, *The Art of the Romans*. Social Life: Glotz, *Ancient Greece at Work*; Warde Fowler, *Social Life at Rome*.

CLASSICS R2. *Life and Letters in the Early Empire.*

Tacitus, *Annals*, XIII, XIV (Furneaux, Oxford University Press); Juvenal, *Satires*, 1, 3, 5, 7; Pliny's Letters, in *Selected Letters of Pliny*, Prichard and Bernard (Oxford, Clarendon Press). The above are to be supplemented by readings in the following books: Capes, *The Early Empire*; Dill, *Roman Society from Nero to Marcus Aurelius*.

CLASSICS R3. *Classical Tragedy.*

Aeschylus, *Agamemnon*; Sophocles, *Oedipus Tyrannus**; Euripides, *Hippolytus*, *Medea**, Seneca, *Oedipus*, *Phaedra*; Corneille, *Médée* or *Oedipe*; Racine, *Andromaque*, *Phèdre*; Voltaire, *Oedipe*, *Oreste*; Dryden, *Oedipus*.

Sheppard, *Greek Tragedy*; Murray, *Ancient Greek Literature*; Lucas, *Seneca and Elizabethan Tragedy*; Wright, *French Classicism*; de Julleville, *Le Théâtre en France*; Faguet, *Propos de Théâtre*, essays on Racine in vols. 1 and 3; Vaughan, *Types of Tragic Drama*; Lucas, *Tragedy*; Nettleton, *English Drama of the Restoration and Eighteenth Century*; *Cambridge History of English Literature*, vol. VIII, the relevant chapters.

Classics students will read the plays marked * in Greek. Latin-French students will select for reading in the original any two of the French plays listed above. The remainder, in each case, will be studied in translations.

CLASSICS R4. *The Odyssey of Homer.*

Homer, *Odyssey*, ed. W. W. Merry (2 vols., Oxford, Clarendon Press); Victor Bérard, *Did Homer Live?*; R. C. Jebb, *Homer: An Introduction to the Iliad and the Odyssey*; T. D. Seymour, *Life in the Homeric Age*.

ANCIENT HISTORY

COURSES OF INSTRUCTION

ANCIENT HISTORY 4. *A Survey of Greek and Roman Society.*

An introductory account of Greek and Roman political and social development; the period from the rise of the Greek city-states to the death of Constantine will be studied and the student will be expected to pay particular attention to those aspects of Greek and Roman society which are most important for an appreciation of modern ideas and institutions. Since it is impossible to cover the whole period in detail, special attention will be given in alternate years to Greece and Rome. In 1953-4 the special study will be Rome.

Text-books: Trever, *History of Ancient Civilization*, 2 vols. (Harcourt, Brace); Thucydides, *History of the Peloponnesian War* (Everyman). Students will also be provided with an outline guide to Greek and Roman history prepared by the Department.

Certain other works dealing with special problems or aspects of Greek and Roman History will be available to extramural students through the lending facilities of the university library.

Lectures—Tuesday, Thursday, Saturday at 11

Professor SMETHURST

ANCIENT HISTORY 51. *Advanced Greek and Roman History.*

Advanced study of certain problems in Greek and Roman History, such as the growth of the city-state, the development of Athenian democracy, the rise of federalism, the collapse of the Roman Republic. The course will be adapted as far as possible to suit the interests of individual students.

Prerequisite—ANCIENT HISTORY 4.

Professor SMETHURST

For information about scholarships in Ancient History, see page 49.

LATIN LANGUAGE AND LITERATURE

For the pass classes, Lewis's *Latin Dictionary for Schools* (Oxford University Press) is recommended, or Lewis' *Elementary Latin Dictionary* (Oxford University Press). Honours students must provide themselves with Lewis and Short's *Latin Dictionary* (Oxford University Press), and Allen and Greenough's *New Latin Grammar* (Ginn and Co.).

LATIN 2 is prerequisite to all other courses in Latin.

A student offering Latin as one of the subjects of concentration on the General Course will take either (a) LATIN 2, 12 and 13; or (b) courses in classical civilization, three of CLASSICAL LITERATURE 1, ANCIENT HISTORY 4, 51, HISTORY 12 (*Mediaeval Europe, 400-1453*).

Classics: Latin

THE HONOURS COURSE IN LATIN

Candidates planning to take the Honours Course in Latin are advised to offer Grade XIII subjects as follows: English, Latin, a science, a second language and a fifth subject which may be a third language, a second science or History. Candidates who cannot offer the above programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

The programme for the degree is as follows:

(a) The Major

- LATIN 2—*Translation and Prose Composition*
- 12—*Vergil*
- 13—*Poets of the Golden Age*
- 20—*Roman Historians, Roman Comedy*
- 30—*Roman Philosophy*
- 31

When Greek is the minor, ANCIENT HISTORY 4 and 51 must also be taken; when English is the minor, an honours course in History, and one of FRENCH 2 (Second Year French), GERMAN 2 (Intermediate German) are required; when French is the minor, an honours course in History, and an honours course in English are required.

Three reading courses: when Greek is the minor, any three; otherwise, CLASSICS R1, R2, and R3.

LATIN 2 and 12 (or 13) should be taken in the same session. CLASSICS R1 should be taken as the first reading course, and as early as possible.

(b) The Minor

GREEK 2, 10, 11, 21; or

FRENCH 2, 10, 11, 14; or

ENGLISH 2 or 5, 10, any two chosen from 15, 19, 20, 22; or

PHILOSOPHY 1, 10, 27 and two advanced courses (See page)

(c) Compulsory general courses to complete the work for degree. With Greek or French as minor: ENGLISH 2, PHILOSOPHY 1, a science. If the candidate has Grade XIII standing in a science he may take a free option, as the third general course. With English as minor: PHILOSOPHY 1, a science, a free option. If the candidate has Grade XIII standing in a science he may take a free option as the second general course. With Philosophy as minor: ENGLISH 2, a science. If the candidate has Grade XIII standing in a science he may take a free option as the second general course.

(d) Two general examinations in Latin.

A minor in Latin normally consists of LATIN 2, 12 or 13, 20, and 30.

Honours students continue throughout their courses the study of morphology, historical grammar, syntax, prosody and composition. These are part of the prescription for LATIN 12, 13, 20, 30.

For information about courses of study leading to High School Teaching Certificates in Classics, Latin and English, Latin and French, see page 89. For information about scholarships in Latin see pages 48 and 49.

COURSES OF INSTRUCTION

LATIN 1. *Translation and Prose Composition.*

Text-books: Bonnie and Niddrie, *Latin Prose and Poetry*, (Montreal, Ginn and Company); Tracy and Law, *Latin Prose Composition*, (Clarke, Irwin and Co.).

A tutorial period will be given for the benefit of students who desire extra assistance.

Lectures—Monday, Wednesday, Friday at 10

Professor MACDONNELL

LATIN 2. *Translation and Prose Composition.*

Text-books: Vergil, *Aeneid*, Book VI, Sidgwick (Pitt Press); *A Book of Latin Verse* (School edition: Oxford University Press); Pliny, *Selected Letters* (Prichard and Bernard, Oxford Press). Exercises in Latin prose composition will be assigned.

Extramural students should supply themselves with the *Classical Dictionary* in the Everyman series (J. M. Dent) and Wilkins, *Roman Literature* (Literature Primers: Macmillan).

Lectures—Tuesday, Thursday, Saturday at 11

Professor TRACY

LATIN 12. *Vergil*

History of the Latin Epic. The *Aeneid*. Brief study of the *Eclogues* and *Georgics*.

Text-book: *P. Vergili Maronis Opera*, Sidgwick (Cambridge University Press).

Hours to be arranged

Professors MACDONNELL and TRACY

LATIN 13. *Poets of the Golden Age.*

Catullus, Horace, Tibullus, Propertius.

Text-books: *Catullus*, Merrill (Ginn and Co.); *Q. Horati Flacci Opera*, Page, Palmer & Wilkins (Macmillan).

Not offered in 1953-4.

LATIN 20. *Roman Historians. Roman Comedy.*

Historians—Livy, Sallust, Cicero; Comedy—Plautus, Terence

Selected Letters of Cicero, Abbott (Ginn and Co.); Livy, Books XXX-XXXIII, Mendell (Appleton, Century); Sallust, ed. Capes (Clarendon Press); Plautus, *Mostellaria*, Fay (Allyn and Bacon); *The Comedies of Terence*, Ashmore (Oxford University Press).

Hours to be arranged

Professors SMETHURST and MACDONNELL

LATIN 30. *Roman Philosophy.*

Stoicism: Cicero, Juvenal, Seneca; Epicureanism: Lucretius.

Cicero, *De Natura Deorum*, Plasberg (Teubner); Juvenal, *Satires*, Duff (Cambridge University Press); Seneca, *Select Letters*, Summers (Macmillan); Lucretius,

Drama, English

De Rerum Natura, Books I, III, Duff (Cambridge University Press).

Not offered in 1953-4.

LATIN 31.

Intensive reading in an author chosen by the student, with consultations and research assignments.

GRADUATE COURSES

For information about graduate courses in Classics, see the *Calendar of Graduate Studies*.

Drama

WILLIAM ANGUS, A.M., Ph.D.

Associate Professor and Director of Drama

MARGARET ANGUS, B.A., *Assistant*

The course in Drama may count as an optional course towards the General B.A. degree, or towards the degree of Honours B.A. On recommendation of the departments concerned, students may apply to the Faculty of Arts for permission to combine courses in Fine Arts (Drama, Art, Music) to make up a group towards the General B.A. degree.

DRAMA. *The Theatre as an Art Form.*

Lectures on the arts and crafts of present-day play production, their theory and practice, and on the development of the theatre, supplemented by a study of plays representative of the historical periods. The students get practice and experience in the productions of the Drama Guild, the Secondary School Drama Festival, and a class play. This course is especially recommended to students intending to become teachers or to engage in social or recreational work.

Text-book: Eric Bentley, *The Play, A Critical Anthology* (Prentice Hall); additional plays and further reading to be assigned.

Lectures—Monday, Wednesday, Friday at 11

English Language and Literature

HENRY ALEXANDER, M.A., F.R.S.C., *Professor*

CHARLES J. VINCENT, M.A., Ph.D., *Professor*

MALCOLM M. ROSS, M.A., Ph.D., *Professor*

E. A. WALKER, M.A., *Associate Professor*

GEORGE WHALLEY, M.A., Ph.D. *Associate Professor*

ARNOLD EDINBOROUGH, M.C., M.A., *Assistant Professor*

ENGLISH 2 (*A General Introduction to English Literature*) is required of all candidates for the general degree.

ENGLISH 2 and two of ENGLISH 3 (*The English Novel*), 5 (*The Neo-Classical Age*) and 7 (*American and Canadian Literature*) are

intended for students offering English as one of the subjects of concentration for the general degree. Students on the General Course are not ordinarily admitted to honours courses but exceptions may be made with the consent of the department. Students on the General Course wishing to apply for admission to an Honours course are advised to consult the head of the department before leaving the University in the previous summer.

Students who intend to enter the Honours Course in English and have at least second class honours in the Grade XIII examinations in English Literature and Composition shall take ENGLISH 2 or 5 and 10 (*An Introduction to Honours in English*) in their first year. They must obtain a standing of at least B in these courses if they wish to continue in honours work.

If students without the above-mentioned qualifications wish to enter on an Honours Course they shall take ENGLISH 2 or 5, and if they obtain at least B on this course they may proceed in the second year to ENGLISH 10 and 15 (*Shakespeare and Elizabethan Drama*).

Honours students who do not take ENGLISH 5 in their first year are advised to attend lectures in this course at some later period.

THE HONOURS COURSE IN ENGLISH

Candidates planning to take the Honours Course in English are advised to offer Grade XIII subjects as follows: English, Latin, a science, a second language and either a third language or History. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack. If Grade XIII Latin has not been taken LATIN 1 must be included in the University programme.

The programme for the degree is as follows:

(a) The Major

ENGLISH 2—*A General Introduction to English Literature*; or

5—*The Neo-Classical Age*

10—*An Introduction to Honours in English*

LATIN 2—*Translation and Prose Composition*; or

CLASSICAL LITERATURE 1—*The Literature of Greece and Rome*. (Candidates for admission to the course of study leading to the Interim High School Assistant's Certificate, Type A, in English and French at the Ontario College of Education (see page 89) shall taken LATIN 2).

14A, 14B—*Old and Middle English*

15—*Shakespeare and Elizabethan Drama*

19—*English Literature from 1500 to 1700*

English

20—*English Literature from 1780 to 1880*

22—*English Literature from 1880 to 1940*

ENGLISH R1—*American and Canadian Literature*

R2—*The Victorian Age*

R3—*The English Novel*

(b) The Minor

HISTORY 3 or 5 or 6, 12, 13 or 19 and one other course numbered over 10. The minor in Social History required for the course leading to the Interim High School Teaching Certificate, Type A, in English at the Ontario College of Education is: HISTORY 3 or 5 or 6 and two courses to be selected from 14, 16, 18A, 18B, 19, 24, 28.

FRENCH 2, 10, 11, 14.

LATIN 2, 12 or 13, 20, 30.

GREEK 2, 10, 11, 21 or ANCIENT HISTORY 51.

GERMAN 2, 10, 12 and 14.

PHILOSOPHY 1, 10, 27 and two advanced courses (See page 158)

SPANISH 2, 10, 22 or 24, 29 or 30.

(c) Compulsory general courses to complete the work for a degree. With History or French or Latin or Greek or German or Spanish as minor: PHILOSOPHY 1, a science, a free option. If the candidate has Grade XIII standing in a science, he may use the second general course as a free option. With Philosophy as minor: a science, two free options. If the candidate has Grade XIII standing in a science he may use the first general course as a free option.

(d) Two general examinations in English.

Except by special permission of the department, students making English their major subject in honours take their courses in the following order: 2 or 5, 10; 14A, 14B, 15; 19, 20; 22; with one reading course in each of the second, third and fourth years. As the Honours Course is planned as a progressive whole it is important that this order be followed.

A minor in English normally consists of ENGLISH 2 or 5, 10, and any two chosen from ENGLISH 15, 19, 20, and 22.

Students offering English for the General Honours Course take the minor as prescribed in the preceding paragraph together with one reading course.

For information about the requirements for the High School Teaching Certificate in English with a minor in Social History and the certificates in English and Latin, and English and French, Spanish or German, see pages 89 and 90. For information about scholarships in English see pages 49, 50, 51.

COURSES OF INSTRUCTION (GENERAL)

ENGLISH A.

At the beginning of the Session, all first year students are given a test set by the Department of English. If they fail to pass they are required to take ENGLISH A. This course consists of two hours of instruction a week, including the writing of original passages or essays, précis, and exercises to improve style and expression.

Once a student is enrolled in English A, the course becomes one of the requirements for a degree and must be taken as an extra class.

A test is given in December and students who pass are released from the course; otherwise they must continue in it until they have passed an examination.

ENGLISH 1. *Prose Composition, with Literary Background.*

A practical course in prose composition, with parallel reading.

Prescribed texts: N. Foerster and J. M. Steadman, *Writing and Thinking* (Boston: Houghton Mifflin; Toronto: Thomas Allen); Dorothy Brewster, *A Book of Modern Short Stories* (Toronto: Macmillan); Sharon Brown, *Essays of Our Times* (Toronto: W. J. Gage). During the session at least one novel, one biography, and one play will be prescribed.

Lectures—Monday, Wednesday, Friday at 10

ENGLISH 2. *A General Introduction to English Literature.*

This course deals with some major works in English literature. It includes the following writers: Chaucer, Shakespeare, Donne, Bacon, Milton, Pope, Boswell, Wordsworth, Browning, Newman, E. M. Forster, T. S. Eliot. A detailed list may be obtained from the Department of English or the Registrar's Office. Emphasis is placed also on English composition.

Each student must possess a satisfactory English dictionary, such as *The Concise Oxford*, *The Thorndike-Barnhart Comprehensive Desk Dictionary* or *The American College Dictionary*.

Lectures—Section A: Monday, Wednesday, Friday at 10

Sections B1, B2: Tuesday, Thursday, Saturday at 9

Sections C1, C2, C3: Tuesday, Thursday, Saturday at 11

ENGLISH 3. *The English Novel.*

A survey of the novel from Jane Austen to the present day.

Prescribed texts: A list can be obtained from the Department of English or the Registrar's Office.

Lectures—Monday, Wednesday, Friday at 11

Professor EDINBOROUGH

ENGLISH 5. *The Neo-Classical Age.*

Prescribed text: Bredvold, McKillop, and Whitney, *Eighteenth Century Poetry and Prose* (New York: The Ronald Press).

Lectures—Monday, Wednesday, Friday at 10

Professors ALEXANDER and WHALLEY

ENGLISH 7. *American and Canadian Literature.*

Prescribed texts: Howard Mumford Jones and Ernest E. Leisy, edd. *Major American Writers* (New York: Harcourt Brace); Louis Dudek and Irving Layton, edd. *Canadian Poems* (Toronto: Contact Press); John D. Robins, ed. *A Pocketful of Canada* (Toronto: Collins); C. G. D. Roberts, *Neighbours Unknown* (Toronto: Macmillan).

Lectures—Monday, Wednesday, Friday at 9

Professor VINCENT

English

COURSES OF INSTRUCTION (HONOURS)

ENGLISH 10. *An Introduction to Honours in English.*

A general study of the history of the English language, of literary forms, and of the fundamental principles of literary criticism. *This course is intended only for those who propose to take Honours in English.*

Prescribed texts: C. L. Wrenn, *The English Language* (Toronto: British Book Service); Smith and Parks, *The Great Critics* (New York: Norton); H. Caudwell, *The Creative Impulse* (Macmillan).

Lectures—Tuesday, Thursday, Saturday at 10

Professors WHALLEY and ALEXANDER

ENGLISH 14A. *Old English.*

C. Alphonso Smith, *An Old English Grammar and Reader* (Boston: Allyn and Bacon).
Professor ALEXANDER

ENGLISH 14B. *Middle English.*

A study of the transition writers and of Chaucer's poetry, based on the following works: *The Romaunt of the Rose*, *The Book of the Duchesse*, *The Parlement of Foules*, *Troilus and Criseyde*, *The House of Fame*, *The Prologue to the Legend of Good Women*, *The Canterbury Tales*.

Prescribed texts: *Chaucer's Complete Works*, ed. F. N. Robinson (Boston: Houghton Mifflin); *The Nun's Priest's Tale*, ed. K. Sisam (Toronto: Oxford University Press); Grace Hadow, *Chaucer and His Times*, Home University Library (Toronto: Clarke, Irwin; New York: Henry Holt); B. Dickins and R. M. Wilson, *Early Middle English Texts* (Cambridge: Bowes and Bowes).

Lectures—Monday, Wednesday, Friday at 3.30

Professor ALEXANDER

ENGLISH 15. *Shakespeare and Elizabethan Drama.*

A review of the life and environment of Shakespeare, and of his development as a dramatist, with lectures on the lives and works of his chief forerunners and contemporaries.

Prescribed texts: *The Complete Works of Shakespeare* (any available edition); Parks and Beatty, *English Drama, 900-1642* (Norton); G. B. Harrison, *Introducing Shakespeare* (Penguin Books); E. M. W. Tillyard, *The Elizabethan World Picture* (London: Chatto and Windus).

Lectures—Tuesday, Thursday, Saturday at 9

Professor EDINBOROUGH

ENGLISH 19. *English Literature from 1500 to 1700.*

Prescribed texts: Edmund Spenser, *Poems* (Oxford University Press); *The Portable Milton* (New York: Viking Press); *Seventeenth Century Prose and Poetry*, vol. 1 edd. White, Wallerstein and Quintana (Macmillan).

Lectures—Tuesday, Thursday, Saturday at 11

Professor ROSS

ENGLISH 20. *English Literature from 1780 to 1880.*

Students are expected to be familiar with the poetry of Wordsworth, Coleridge, Blake, Byron, Shelley, and Keats. A brief introduction to the Victorian period will also be offered.

Prescribed texts: Oxford Standard Authors editions of Wordsworth, Coleridge, Shelley, Keats, Byron (Toronto: Oxford University Press); World's

Classics Nos. 206, 310, 311 (Toronto: Oxford University Press).

Lectures—Tuesday, Thursday, Saturday at 9

Professor WHALLEY

ENGLISH 22. *English Literature from 1880 to 1940.*

A seminar course which should be taken in the final year of honours work.

Prescribed texts: G. D. Sanders and J. H. Nelson, edd. *Chief Modern Poets of England* (New York: Macmillan); T. S. Eliot, *Poems* (Penguin Books); Walter De La Mare, *Stories, Essays, and Poems* (London: Dent).

Lectures—Monday, Wednesday, Friday at 11

Professor VINCENT

Reading Courses

The prescribed texts for reading courses may be obtained from the Registrar's Office.

ENGLISH R1. *American and Canadian Literature.*

Professor VINCENT

ENGLISH R2. *The Victorian Age.*

Professor ROSS

ENGLISH R3. *The English Novel.*

Professor WHALLEY

GRADUATE COURSES

For information about graduate courses in English, see the *Calendar of Graduate Studies*.

French Language and Literature

W. H. EVANS, B.A., Docteur de l'Université de Paris, *Professor*

GLEN SHORTLIFFE, M.A., Ph.D., *Associate Professor*

R. L. FAUCONNIER, L. ès L., Agrégé de l'Université, *Associate Professor*

JEAN OGIER, L. ès L., *Lecturer*

JEANNE M. MCCONNELL, Brevet Supérieur, C.A.P., *Instructor*

FRENCH 1 is prerequisite to FRENCH 2, and FRENCH 2 is prerequisite to all other courses in French.

Candidates offering French as one of the subjects of concentration on the General Course take FRENCH 1 (*First Year French*), FRENCH 2 (*Second Year French*), FRENCH 3 (*Third Year General*), if they have not included French in their Grade XIII programme; FRENCH 2, 3, 14 (*Survey of French Literature; Prose Composition*), if they have offered French of Grade XIII as one of the subjects for admission.

THE HONOURS COURSE IN FRENCH

Candidates planning to take the Honours Course in French are advised to offer Grade XIII subjects as follows: English, Latin, French, a science and a fifth subject which may be a third language, a second science or

French

History. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

The programme for the degree is as follows:

(a) The Major

- FRENCH 2—*Second Year French*
10—*Language; French Civilization*
20—*French Literature from 1630 to 1750*
11—*Language; History of the Language*
21—*French Literature from 1750 to 1850*
23—*Nineteenth Century; Advanced Prose Composition*
25—*Sixteenth Century Literature*

With one course selected from LATIN 2 (*Translation and Prose Composition*), ANCIENT HISTORY 4 (*A Survey of Greek and Roman Society*), CLASSICAL LITERATURE 1 (*The Literature of Greece and Rome*), ENGLISH 15 (*Shakespeare and Elizabethan Drama*), ITALIAN A, a course in German, HISTORY 6 (*The Evolution of Europe*).

- FRENCH R1—*France—History and Institutions*
R2—*The Nineteenth Century Novel*
R3—*La pensée française; or*
R4—*Le Roman canadien-français*

The Honours programme in French is planned as a progressive whole, and it is important that the courses be taken in the following order: FRENCH 2; FRENCH 10, 20 in the first year of Honours; FRENCH 11, 21 in the second year of Honours; FRENCH 23, 25 in the final year.

(b) The Minor

- LATIN 2, 12 or 13, 20, 30; or
ENGLISH 2 or 5, 10, any two chosen from 15, 19, 20, 22; or
GERMAN 2, 10, 12 and 14; or
SPANISH 2, 10, 22 or 24, 29 or 30; or
HISTORY 3 or 5 or 6, 12, 13 or 19, and one other course numbered over 10.

(c) Compulsory general courses to complete the work for degree. With Latin, German, Spanish or History as minor: ENGLISH 2, PHILOSOPHY 1, a science. If the candidate has Grade XIII standing in a science he may use the third general course as a free option. With English as minor: PHILOSOPHY 1, a science, a free option. If the candidate has Grade XIII standing in a science he may use the second general course as a free option.

(d) Two general examinations in French.

All students must provide themselves with a dictionary. For pass classes Harrap's *Shorter French and English Dictionary* should be procured. For honours classes *Le petit Larousse Illustré* is indispensable.

For information about the course of study leading to High School certificates in Latin and French, English and French, French and German, French and Spanish, see pages 89 and 90.

A minor in French normally consists of FRENCH 2, 10, 11, 14.

Students offering French for the General Honours Course take the minor prescribed in the preceding paragraph with one reading course.

Oral Work. All oral examinations must be taken at the University. An oral examination is required of students taking FRENCH 2 (see FRENCH 2) and courses over FRENCH 2. All students taking any course numbered over 2 attend oral classes for one hour a week and take the oral examination in March. Students taking FRENCH 2 may be required to attend such classes. Hours are arranged at the beginning of the term.

For information about scholarships in French see page 51.

COURSES OF INSTRUCTION

FRENCH 1. *First Year French.*

Grubbs and Lapp, *French Reviewed for Colleges* (Houghton-Mifflin); Palamountain, *Learning French from Modern Writers* (Macmillan); Simenon, *Le témoignage de l'enfant de chœur* (Clarke-Irwin); Pagnol, *Topaze* (Heath).

Lectures—Tuesday, Thursday, Saturday at 11

Mr OGIER

FRENCH 2. *Second Year French.*

Romains, *Knock* (Appleton-Century); Balzac, *Le Curé de Tours* (Heath); Zola, *La Débâcle* (Heath); Whitmarsh, *Complete French Course* (Longmans).

The oral examination will be held in March. In order to be credited with this course, students must satisfy the oral requirements at the University, either during the term or at the Summer School.

Lectures—Monday, Wednesday, Friday at 10 or

Tuesday, Thursday, Saturday at 10

Professors EVANS, SHORTLIFFE, FAUCONNIER, and Mr OGIER

FRENCH 3. *Third Year General.*

Whitmarsh and Jukes, *Advanced French Course* (Longmans); Steinhauer and Walter, *Omnibus of French Literature*, Vol. I (Macmillan); R. Rolland, *L'Aube* (Holt); Gide, *Isabelle* (Appleton-Century).

Lectures—Tuesday, Thursday, Saturday at 10

Mr OGIER

FRENCH 10. *Language; French Civilization.*

Cattànès and Robert, *Promenades historiques et littéraires* (Harcourt, Brace); Chinard, *Scènes de la vie française* (revised edition, 1950) (Ginn); Ritchie,

French

New Manual of French Composition (C.U.P.); Mansion, *Grammar of Present-Day French*, and *Exercises in French Syntax* (Harrap).

Lectures—Monday, Wednesday, Friday at 11 Professor FAUCONNIER

FRENCH 11. *Language; History of the Language.*

Prerequisite—FRENCH 10. Text-books: Ritchie, *New Manual of French Composition* (C.U.P.); Armstrong, *The Phonetics of French* (Bell); Paton, *Manual of Old French* (Nelson); Ritchie and Simons, *French Passages for Translation* (C.U.P.).

Lectures—Monday, Wednesday, Friday at 9 Professor EVANS

FRENCH 14. *Survey of French Literature; Prose Composition.*

Steinhauer and Walter, *Omnibus of French Literature*, Vols. 1 and 2 (Macmillan); Whitmarsh and Jukes, *Advanced French Course* (Longmans).

Lectures—Monday, Wednesday, Friday at 10 Professor SHORTLIFFE

FRENCH 20. *French Literature from 1630 to 1750.*

Castex & Surer, *XVIIe siècle* (Hachette); Corneille, *Le Cid*; Molière, *Le Misanthrope*, *L'Avare*; Racine, *Andromaque*; Marivaux, *Le Jeu de l'Amour et du Hasard*; La Fontaine, *Fables choisies* (vol. 1); Mme de la Fayette, *La Princesse de Clèves*; Prévost, *Manon Lescaut*; Voltaire, *Le Siècle de Louis XIV* (All Classiques Larousse).

Lectures—Tuesday, Thursday, Saturday at 11 Professor EVANS

FRENCH 21. *French Literature from 1750 to 1850.*

Fellows & Torrey, *The Age of Enlightenment* (Crofts); Voltaire, *Candide* (Clarke, Irwin); Steinhauer and Walter, *Omnibus of French Literature*, Vol. II (Macmillan).

Lectures—Monday, Wednesday, Friday at 11 Professor SHORTLIFFE

FRENCH 23. *Nineteenth Century; Advanced Prose Composition.*

French Plays of the Nineteenth Century (Harper); Galland & Cros, *Nineteenth Century French Verse* (Appleton-Century); Galland & Cros, *Nineteenth Century French Prose* (Appleton-Century); Ritchie, *New Manual of French Composition* (C.U.P.); Mansion, *Grammar of Present-Day French; Exercises in French Syntax* (Harrap).

Lectures—Tuesday, Thursday, Saturday at 11 Professor FAUCONNIER

FRENCH 25. *Sixteenth Century Literature.*

Evans & Jones, *Prose and Verse Selections from Sixteenth Century French Authors* (Crofts).

Lectures—Monday, Wednesday, Friday at 11 Professor EVANS

Reading Courses

FRENCH R1. *France—History and Institutions.*

Guéard, *French Civilisation*; Siegfried, *France, A Study in Nationality*; Brogan, *The Development of Modern France*; D. Thomson, *Democracy in France: The*

French, Geology

Third and Fourth Republics; Ritchie, *France, a Companion to French Studies*; *Encyclopédie politique de la France et du monde* (Selections); Earle, *Modern France* (Selections).
Professor SHORTLIFFE

FRENCH R2. *The Nineteenth Century Novel.*

V. Hugo, *Notre Dame de Paris*; Stendhal, *Le Rouge et le Noir*; Balzac, *Eugénie Grandet*; Flaubert, *Madame Bovary*; V. Hugo, *Les Misérables*; Goncourt, *Manette Salomon*; Zola, *La Fortune des Rougon*, *Le Roman Expérimental*; Daudet, *Le Nabab*; Maupassant, *Pierre et Jean*; P. Bourget, *Le Disciple*; A. France, *L'Orme du Mail*.
Professor FAUCONNIER

FRENCH R3. *La pensée française.*

Montaigne, *Essais*; Descartes, *Discours de la Méthode*; Pascal, *Pensées*; Voltaire, *Traité sur la Tolérance*; J. J. Rousseau, *Contrat Social*, *Profession de foi du vicaire savoyard*; A. Comte, *Cours de philosophie positiviste, leçons 1 et 2*; Taine, *Introduction à l'histoire de la littérature anglaise*; Bergson, *Le Rire*; Sartre, *Qu'est-ce que la littérature?*
Professor SHORTLIFFE

FRENCH R4. *Le Roman canadien-français.*

Gaspé, *Les Anciens Canadiens*; Guérin-Lajoie, *Jean Rivard le défricheur*; Savard, *Menaud, maître draveur*; Grignon, *Un homme et son péché*; Desrosiers, *Les engagés du grand portage*; H. Bernard, *La ferme des pins*; Ringuet, *Le poids du jour*; R. Charbonneau, *Fontile*; G. Martin, *Tentations*; Lemelin, *Au pied de la pente douce*; Germaine Guèvremont, *Le survenant*; Gabrielle Roy, *Bonheur d'occasion*; Giroux, *Au delà des visages*.
Mr OGIER

GRADUATE COURSES

For information about graduate courses in French, see the *Calendar of Graduate Studies*.

Geological Sciences

J. E. HAWLEY, M.A., Ph.D., F.G.S.A., F.R.S.C., *Miller Memorial Research Professor and Chairman of Graduate Geological Studies*

B. ROSE, B.Sc., Ph.D., F.R.S.C., F.G.S.A., *Professor*

J. W. AMBROSE, B.A., Ph.D., F.R.S.C., F.G.S.A., *Professor*

A. W. JOLLIFFE, M.A., Ph.D., F.R.S.C., F.G.S.A.,

Professor and Chairman of Undergraduate Geological Studies

L. G. BERRY, M.A., Ph.D., F.G.S.A., F.M.S.A., F.R.S.C.,
Associate Professor (on leave of absence, Session 1953-4)

J. L. USHER, B.A., M.Sc., Ph.D., *Assistant Professor*

M. M. FITZPATRICK, M.A., *Assistant Professor*

YADVIGA RIMSAITE, *Research Assistant*

Assistants—G. ALLARD, B.A., H. D. CARLSON, M.Sc., D. J. EMERY, B.Sc.,

Geology

R. W. GINN, W. O. J. GROENEVELD-MEIJER, Dipl. Pét. Eng., L. B. HALFERDAHL, B.Sc., R. KNUTSON, P. LecomTE, B.Sc., CLYDE LEWIS, B.Sc., W. J. PEARSON, B.Sc., P. SAUVÉ, B.Sc., J. E. G. SCHWELLNUS, B.Sc., R. W. TRAILL, M.Sc., W. WEGENAST, B.Sc.
Assistant Spectrographers—Y. RIMSAITE, Dipl. Geol., G. MACDONALD.

Students taking GEOLOGY 2 (*Elementary Mineralogy*) must have Grade XIII standing in Chemistry or have passed in CHEMISTRY 1. GEOLOGY 1 (*Elementary Geology and Physiography*) and GEOLOGY 2 (*Elementary Mineralogy*) are prerequisite for courses numbered 10 and over. GEOLOGY 11 (*Structural Geology and Geomorphology*) and GEOLOGY 12 (*Optical Mineralogy and Petrography*) are prerequisite for courses numbered 16 and over.

Students selecting Geological Science as one of the subjects of concentration on the General Course are required to take GEOLOGY 1 (*Elementary Geology and Physiography*) and 2 (*Elementary Mineralogy*). The third course may be chosen from GEOLOGY 10A (*Elements of Optical Mineralogy*) with 13B (*Physical Mineralogy and Crystallography*), or GEOLOGY 11 (*Structural Geology and Geomorphology*), or GEOLOGY 12 (*Optical Mineralogy and Petrography*).

THE HONOURS COURSE IN GEOLOGICAL SCIENCES

Candidates planning to take the Honours Courses in the Geological Sciences should offer Grade XIII subjects as follows: English, Mathematics (3 papers), Physics, Chemistry and a language. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack. They should note, however, that these deficiencies must be made up without delay.

Three Honours Courses are offered:

- I. General Geology with a minor in Chemistry;
- II. Mineralogy and Petrology with a minor in Chemistry;
- III. Paleontology and Stratigraphy with a minor in Biology and Chemistry.

Candidates taking the Honours Course in Paleontology and Stratigraphy must have BIOLOGY 1 or its equivalent. They may, upon approval by the department, substitute courses in Biology, Geology or Chemistry for Geophysics (GEOLOGY 17 and 26) and MATHEMATICS 2, and will then take both GEOLOGY 27 and Reading Course 3.

Candidates for admission to an Honours Course in the Geological Sciences must make 62 per cent in GEOLOGY 1 and 2.

The minor in the Geological Sciences with Chemistry as major is made up as follows: GEOLOGY 1, 2, 10A, and 13B or 12, 14 (*Descriptive and Determinative Mineralogy*), and GEOLOGY 18B (*Sedimentation*).

First Year

The programme for the degree is as follows:

GEOLOGY	1— <i>Elementary Geology and Physiography</i>
MATHEMATICS	2— <i>Differential and Integral Calculus</i>
PHYSICS	2— <i>Electricity, Magnetism, and Light</i>
CHEMISTRY	2— <i>General Chemistry</i>
PHILOSOPHY	1— <i>Introduction to Philosophy</i>

Second Year

I. General Geology, and

II. Mineralogy and Petrology

GEOLOGY	2— <i>Elementary Mineralogy</i>
	11— <i>Structural Geology and Geomorphology</i>

CHEMISTRY 11—*Analytical Chemistry*

ENGLISH 2—*Introduction to English Literature*

GEOLOGY R1—*History of the Progress of Geology*

III. Paleontology and Stratigraphy

GEOLOGY 2—*Elementary Mineralogy*

11—*Structural Geology and Geomorphology*

BIOLOGY 16—*Comparative Vertebrate Anatomy*

MATHEMATICS 3—*Applied Statistics*

ENGLISH 2—*Introduction to English Literature*

Third Year

I. General Geology

GEOLOGY 12—*Optical Mineralogy and Petrography*

14—*Descriptive and Determinative Mineralogy*

15A—*Engineering Geology (Optional)*

17—*Introduction to Geophysics*

18B—*Sedimentation*

25A—*Systematic Paleontology*

CHEMISTRY 14—*Physical Chemistry*

II. Mineralogy and Petrology

GEOLOGY 12—*Optical Mineralogy and Petrography*

13B—*Physical Mineralogy and Crystallography*

14—*Descriptive and Determinative Mineralogy*

17—*Introduction to Geophysics*

18B—*Sedimentation*

Geology

- CHEMISTRY 14—*Physical Chemistry*
III. Paleontology and Stratigraphy
 GEOLOGY 12—*Optical Mineralogy and Petrography*
 25A—*Systematic Paleontology*
 18B—*Sedimentation*
 17—*Introduction to Geophysics*—half course
 BIOLOGY 10—*General Botany*
 CHEMISTRY 12—*Organic Chemistry*
Reading Course 1—*History of the Progress of Geology*

Fourth Year

- I. General Geology
 GEOLOGY 16A—*Field Geology*
 20—*Stratigraphy and Historical Geology*
 21—*Economic Geology of Metallic Minerals*
 26—*Geophysical Prospecting*
 24—*Petrology*
 27—*Research and Thesis*; or a Reading Course
 Two general examinations in Geology
II. Mineralogy and Petrology
 GEOLOGY 16A—*Field Geology*
 26—*Geophysical Prospecting*
 21—*Economic Geology of Metallic Minerals*
 24—*Petrology*
 27—*Research and Thesis*; or a Reading Course
 Two general examinations in Geology
III. Paleontology and Stratigraphy
 GEOLOGY 16A—*Field Geology*
 26—*Geophysics*
 20—*Stratigraphy and Historical Geology*
 24—*Petrology*
 27—*Research and Thesis*; or/and
Reading Course 3—*Evolution and Earth History* and two general examinations in Geology

COURSES OF INSTRUCTION

GEOLOGY 1. *Elementary Geology and Physiography.*

Lectures: External and internal geological processes and the resultant topography; an outline of the history of the earth; fossils and their significance; a preparatory course along with GEOLOGY 2 (*Elementary Mineralogy*) for the Honours Course in Geological Sciences; a background course for physical geography; illustrated with maps, models, pictures and slides.

Laboratory: Identification of common rocks, minerals and fossils; interpretation of geological and topographical maps; structural and stratigraphic problems; field trips during the fall term.

Text-book: von Engel & Caster, *Geology* (McGraw-Hill).

Lectures—Tuesday and Thursday at 11

Laboratory—Three sections (not more than 40 students per section); Monday, 1-4; Tuesday, 1-4; Wednesday, 1-4. Professor USHER

GEOLGY 2. *Elementary Mineralogy* (MINERALOGY 1).

A course in elementary crystallography, blowpipe analysis and descriptive and determinative Mineralogy of about 100 common or more important minerals.

Prerequisite—Honours Matriculation Chemistry, or CHEMISTRY 1 taken concurrently. **Text-book:** Kraus, Hunt & Ramsdell, *Mineralogy* (McGraw-Hill), 2nd edn., 1951.

Two sections with Science Geology II.

Lectures—Monday and Wednesday at 11

Laboratory—Tuesday 1.30-3.30 or 3.30-5.30

Professor BERRY

GEOLGY 10A. *Elements of Optical Mineralogy* (MINERALOGY 10A).

Optical properties of crystals including non-opaque minerals and chemical compounds.

Prerequisites—MATHEMATICS 1 and PHYSICS 1. **Text-book:** Wahlstrom, *Optical Crystallography*, 1951, 2nd edn. (Wiley).

Lectures—Wednesday and Friday at 10, first term

Laboratory—Thursday, 1.30-3.30 or Saturday 9-11

Professor BERRY

GEOLGY 11. *Structural Geology and Geomorphology*.

Inherent and imposed structures in sedimentary, igneous, and metamorphic rocks, with particular attention to sedimentation, faulting, folding and shearing. Topography using structure as a basis of interpretation. Physiographic cycles, under normal, arid, glacial, karst and marine conditions. The interpretation of topographic and geologic maps. Illustration from Canadian occurrences where possible.

Text-books: Nevin, *Structural Geology*; Platt, *Geological Map Exercises*.

Lectures—Monday and Wednesday at 9

Laboratory—Friday, 1.30-3.30

Professor ROSE

GEOLGY 12. *Optical Mineralogy and Petrography*.

Optical properties of non-opaque minerals; introduction to the use of the polarizing microscope; introduction to the study of rocks.

Prerequisites—GEOLGY 1 and 2. **Text-books:** Wahlstrom, *Optical Crystallography*, 2nd edn., 1951; Wahlstrom, *Igneous Minerals and Rocks*; Pirsson and Knopf, *Rocks and Rocks Minerals*.

Lectures—Wednesday and Friday at 10

Laboratory—Thursday, 1.30-3.30 or Saturday, 9-11, first term;

Wednesday, 3.30-5.30 and Thursday, 1.30-3.30, second term

Professor BERRY

GEOLGY 13B. *Physical Mineralogy and Crystallography*. (MINERALOGY 10B).

An advanced course in the character of crystals, crystal measurements and crystal drawing.

Prerequisites—GEOLGY 2, PHYSICS 1, MATHEMATICS 1. **Text-books:** Dana,

Geology

Text-book of Mineralogy, 1932 (Wiley), or Phillips, *An Introduction to Crystallography*, 1946 (Longmans). Books of Reference: Bragg, *X-rays and Crystal Structure*, 4th edn.; Evans, *Crystal Chemistry* (Cambridge Univer. Press), 1939; Bunn, *Chemical Crystallography* (Oxford), 1946.

Lectures—Monday at 10, Friday at 9, second term

Laboratory—Thursday, 3.30-5.30, second term

Professor BERRY

GEOLOGY 14. *Descriptive and Determinative Mineralogy.*

(MINERALOGY 11).

The properties, occurrences, valuation, and uses of ore and industrial minerals, and their determination by blowpipe and microchemical methods.

Prerequisite—GEOLOGY 1 and 2. Text-books: *Dana's Text-book of Mineralogy*, Ford 4th ed. (John Wiley and Sons); *Economic Mineral Deposits*, Bateman (McGraw-Hill, 1950).

Lectures—Tuesday and Friday at 11

Laboratory—Wednesday, 1.30-3.30

Professor JOLLIFFE

GEOLOGY 15A. *Engineering Geology.*

A study of the application of geological principles to engineering projects. Properties of the regolith, distribution and movement of subsurface waters, earth movements and structures, stream and shoreline processes, and special features of glacial action will be discussed in relation to foundation problems, tunnels and excavations, dam and reservoir sites, river improvement and harbour maintenance.

Prerequisites—GEOLOGY 1 and 2. Text-book: *Elements of Engineering Geology* (Ries & Watson); or Trefethen, *Geology for Engineers* (Van Nostrand).

Lectures—Wednesday at 11 and Friday at 8, first term

Professor AMBROSE

GEOLOGY 16A. *Field Geology* (GEOLOGY 17A).

The field work of this course should be taken at the end of the penultimate year. Field work consists of a systematic geological survey of a selected area in southeastern Ontario. Unless otherwise announced, headquarters for the survey camp will be Queen's Biological Station on Lake Opinicon. Students live at the camp and complete their field work during the ten days following spring examinations (dates to be announced). Each student plots the survey data and prepares a contoured geological map to scale, together with a geological report on the area studied during the fall term following. Some time is also devoted to the practice of elementary photogrammetry.

Prerequisites—GEOLOGY 1, 2, 11, 12. Reference Book: Lahee, *Field Geology*.

Lectures and Laboratory—Monday, 1.30-4.30, first term

Professor FITZPATRICK

GEOLOGY 17. *An Introduction to Geophysics.*

Magnetic and gravimetric methods of geophysical prospecting. The design of instruments is discussed and formulae are developed which are useful in the interpretation of geophysical data.

Prerequisite—MATHEMATICS 2. Reference Books: Jakosky, *Exploration Geophysics*; Nettleton, *Geophysical Prospecting for Oil*.

Lectures—Tuesday at 10

Professor FITZPATRICK

GEOLOGY 18B. *Sedimentation.*

A short course in the principles of sedimentation and in sedimentary petrography.

Prerequisites—GEOLOGY 1, 2, 11, 12 and MATHEMATICS 3A. GEOLOGY 12 and 18B may be taken concurrently. Text-book: Pettijohn, *Sedimentary Rocks* (Harper), or Krumbein & Sloss, *Stratigraphy and Sedimentation* (Freeman). Reference texts: W. H. Twenhofel, *Principles of Sedimentation* (McGraw-Hill, 1939); H. B. Milner, *Sedimentary Petrography*, (Thos. Murby, 1929); Krumbein & Pettijohn, *Manual of Sedimentary Petrography* (Appleton-Century, 1938).

Lectures—Monday at 11, Wednesday at 8, second term

Laboratory—Monday 1.30-3.30, second term

Professor USHER

GEOLOGY 20. *Stratigraphy and Historical Geology.*

The rôle of tectonics in, and the basic principles of, stratigraphy; the facies concept; the values and limitations of fossils in stratigraphic correlation; continental and organic evolution with special reference to North America.

Prerequisites—GEOLOGY 25A and 18B. Text-books: Krumbein & Sloss, *Stratigraphy and Sedimentation* (Freeman); Dunbar, *Historical Geology* (John Wiley & Sons), or Moore, *Historical Geology* (McGraw-Hill).

Lectures—Tuesday and Thursday at 9

Laboratory—Thursday 3.30-5.30

Professor USHER

GEOLOGY 21. *Economic Geology of Metallic Minerals.*

(GEOLOGY 15, MINERALOGY 14A).

The principles of ore deposition and description of ore deposits, Canadian and others. The laboratory work consists of examination of ores in both hand specimens and polished sections and problems.

Text-book: Bateman, *Economic Mineral Deposits* (McGraw-Hill, 1950); or Lindgren, *Mineral Deposits* (McGraw-Hill, 1933). References: Bruce, *Mineral Deposits of the Canadian Shield* (Macmillan); *Structural Geology of Canadian Ore Deposits* (Can. Inst. Mining & Met., 1949); Publications of the Geological Survey, Ont. Dept. of Mines and Quebec Dept. of Mines.

Lectures—Three hours per week, first term, two hours, second term

Monday and Tuesday at 11 (Economic Geology)

Wednesday at 10, first term (Mineralography)

Laboratory—Thursday 1.30-3.30 or 3.30-5.30

Professor HAWLEY

GEOLOGY 24. *Petrology* (GEOLOGY 14).

A course of lectures will be given on the classification of igneous, sedimentary, and metamorphic rocks. Considerable attention will be given to the genesis of rock types, and to the physico-chemical conditions effective in the generation and differentiation of magmas. Laboratory work will consist of the study of rocks suites and determination of mineral composition by petrographic methods.

Prerequisites—GEOLOGY 1, 2, 12.

Lectures—Tuesday and Thursday at 10

Laboratory—Tuesday, 1.30-3.30

Professor AMBROSE

Geology

GEOLOGY 25A. *Systematic Paleontology.*

Invertebrate fossils, their morphology, taxonomy and identification; a summary outline of fossil vertebrates and plants.

Text-book: Shimer, *An Introduction to the Study of Fossils* (Macmillan).

Reference: Twenhofel & Shrock, *Invertebrate Paleontology* (McGraw-Hill).

Lectures—Monday at 11, Friday at 9, first term

Laboratory—Monday, 1.30-3.30, first term

Professor USHER

GEOLOGY 26. *Geophysics.*

This course is an extension of GEOLOGY 17. In the first term electrical, seismic, and radioactive methods of geophysical prospecting are discussed. The second term is devoted to a study of the physical properties of rocks and the application of geophysical methods to the investigation of broad geological problems.

Prerequisite—GEOLOGY 17. Reference Books: Jakosky, *Exploration Geophysics*; Nettleton, *Geophysical Prospecting for Oil*; Jeffreys, *The Earth*.

Lectures—Monday at 10, all year; Thursday at 11, first term.

Wednesday at 10, second term

Laboratory—Wednesday 1.30-3.30

Professor FITZPATRICK

GEOLOGY 27. *Research and Thesis.*

Directed research on either mineralogical or geological problems designed to train the student in research methods. A thesis embodying the results of the investigation is required. Material for such studies may be gathered by students during summer field work or may be supplied by the department.

This course may be taken in lieu of a reading course.

Six hours per week.

Reading Courses

GEOLOGY R1. *History of the Progress of Geology.*

Geikie, *The Founders of Geology*; Adams, *The Birth and Development of Geologic Science*; *Geology—1888-1938*, Geol. Soc. Amer. 50th Anniversary volume.

Conferences will be arranged.

Professor AMBROSE

GEOLOGY R2. *Magmas and Their Behaviour.*

This course may be taken with or following GEOLOGY 24.

Turner and Verhoogen, *Igneous and Metamorphic Petrology* (McGraw-Hill) Ch. 1 to 14 inclusive; *Origin of Granites*. Geol. Soc. Am. Mem. 28; Balk, *Structural Behaviour of Igneous Rocks*, Geol. Soc. Amer. Mem. 5; Shand, *Irruptive Rocks*.

Conferences will be arranged.

Professor AMBROSE

GEOLOGY R3. *Evolution of Earth History.*

Darwin, *The Origin of Species*; Simpson, *The Meaning of Evolution, and Tempo and Mode in Evolution*; Arkell, W. J., *The Jurassic System in Great Britain*, pp. 1-37; Hooten, *Up From the Apes*; Romer, *Man and Vertebrates: Selected Articles*.

Conferences will be arranged.

Professor USHER

GEOLOGY R4. *World Distribution of Minerals and its Significance.*

Van Royen, W. and Bowles, O., *The Mineral Resources of the World* (Prentice-Hall, 1952); T. S. Lovering, *Minerals in World Affairs* (Prentice-Hall, 1943); additional selected papers.

Conferences will be arranged.

Professor JOLLIFFE

GEOLOGY R5. *X-Rays and Crystal Structure.*

K. Lonsdale, *Crystals and X-rays*, 1948 (Bell & Sons, London); C. W. Bunn, *Chemical Crystallography*, 1946 (Oxford, Clarendon Press); W. L. Bragg, *Atomic Structure of Minerals* (Cornell Univ. Press, 1937); additional selected papers.

Conferences will be arranged.

Professor BERRY

GEOLOGY R6. *Metamorphic Geology.*

This reading course is designed to broaden the students' knowledge of metamorphic processes affecting minerals and rocks, and may be taken with or following GEOLOGY 24.

C. K. Leith and W. J. Mead, *Metamorphic Geology* (New York, 1915) (available in Miller Library only) Part I and II. Chapters I, II, VIII; A. Harker, *Metamorphism* (Methuen and Co., 1932); Turner and Verhoogen, *Igneous and Metamorphic Petrology* (McGraw-Hill, 1951).

Weekly conference will be arranged.

Professor HAWLEY

GRADUATE COURSES

For information about graduate courses in Geological Sciences, see the *Calendar of Graduate Studies*.

German Language and Literature

HILDA C. LAIRD, B.A., B.L.S., Ph.D., *Professor*

HANS EICHNER, B.A., Ph.D., *Assistant Professor*

GERMAN A may be counted towards a General degree or as an optional course towards an honours degree. It may not be counted towards a major or a minor in German. Students who enter the University without matriculation in German and who wish to specialize in this subject may complete their programme of work in the usual time by taking GERMAN A during their first winter session and GERMAN 1 in the following summer.

Students offering German as one of the three subjects of concentration on the General Course should take GERMAN A (*Preparatory German*), GERMAN 1 (*Elementary German*) and GERMAN 2 (*Intermediate German*), if they have not studied German previously; GERMAN 1, 2 and 10 (*German Cultural History and Literature; Composition and Translation*), if

German

they have Grade XII standing in German; GERMAN 2, 10 and one further honours course, GERMAN 12 (*Nineteenth Century Drama; Advanced Composition*) or GERMAN 14 (*Modern Literature; Advanced Composition*) if they have Grade XIII standing in German. Additional courses in German may be taken with the consent of the department.

THE HONOURS COURSE IN GERMAN

Candidates planning to take the Honours Course in German are advised to offer Grade XIII subjects as follows: English, Latin, German, French, and a science. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

The programme for the degree is as follows:

(a) The Major

GERMAN 2—*Intermediate German*

10—*German Cultural History and Literature; Composition and Translation*

12—*Nineteenth Century Drama; Advanced Composition*

14—*Modern Literature; Advanced Composition*

15—*Goethe and Schiller*

16—*German Literature of the Early Nineteenth Century*

20—*Introduction to Middle High German*

with HISTORY 6—*The Evolution of Europe*. Students whose minor is in history should substitute either LATIN 2 (*Translation and Prose Composition*) or PHILOSOPHY 10 (*Problems of Philosophy*).

GERMAN R1—*Deutsche Geschichte*

R2—*Die deutsche Novelle*

R3—*Der deutsche Roman*

(b) The Minor

FRENCH 2, 10, 11, and 14; or

SPANISH 2, 10, 22 or 24, 29 or 30; or

ENGLISH 2 or 5, 10, any two chosen from 15, 19, 20, 22; or

HISTORY 6, 12, 24 and 27; or

PHILOSOPHY 1, 10, 27 and two advanced courses (see page 158).

Other minors may be selected in consultation with the department.

(c) Compulsory general courses to complete the work for a degree:

ENGLISH 2, PHILOSOPHY 1, a science. If the candidate has Grade XIII standing in a science he may use the third general course as a free option.
(d) Two general examinations in German.

Students making German their major subject in Honours and students taking the Courses leading to the High School Teaching Certificate in English and German, and French and German should arrange their courses in German as follows: GERMAN 2; GERMAN 10 and either 12 or 14 in the first year of honours; GERMAN 12 or 14 and 15 or 16 in the second year of honours; GERMAN 15 or 16 in the final year. Reading courses may be taken in the second or in the final year of honours, or in the summer.

For information about the course of study leading to the High School Teaching Certificates in English and German and French and German, see pages 89, 90.

A minor in German normally consists of GERMAN 2, 10, 12, and 14.

Students offering German for the General Honours Course take the minor as prescribed in the preceding paragraph with GERMAN R2.

All students taking GERMAN 2 and honours courses in German have one period (1 hour) of instruction in conversation each week. Oral examinations are held in March. A satisfactory mark on the oral examination is a requirement in each course.

For information about scholarships in German and the German Exchange Scholarship see pages 51 and 52.

Students should provide themselves with a dictionary, at first Cassell's *English-German Dictionary* then an all German one, such as *Der Sprach-Brockhaus*.

COURSES OF INSTRUCTION

GERMAN A. *Preparatory German.*

This course is intended to meet the needs of students who enter the University with little or no knowledge of German. The work comprises drill on pronunciation, a study of the elements of grammar, the reading of easy literature, oral and written composition.

Text-books: Curts, *Basic German*, 3rd edn. (Prentice-Hall); Goedsche, *Sag's auf deutsch!* (Crofts); *Jugendpost*, A periodical for students of German; Peter Fabrizius, *Wer zuletzt lacht.....* (Appleton-Century).

Lectures—Tuesday, Thursday, Saturday at 10 and one additional afternoon hour.

Professor LAIRD

GERMAN 1. *Elementary German.*

The work includes the reading of texts, a more advanced study of grammar and syntax (including written and oral exercises), memorizing of poems, writing from dictation and translation at sight.

German

Prerequisite—GERMAN A, or Grade XII standing. Text-books: Röseler, *German in Review*, rev. edn. (Holt); Foltin, *Aus nah und fern* (Houghton Mifflin); Kästner, *Drei Männer im Schnee* (Crofts); Fleissner and Fleissner, *Kleine Anthologie deutscher Lyrik* (Crofts).

Lectures—Tuesday, Thursday, Saturday at 10

Professor EICHNER

GERMAN 2. *Intermediate German.*

The work consists of a more intensive study of modern literature, both prose and verse, oral and written composition, and a more advanced study of grammar and syntax.

Prerequisite—GERMAN 1, or Grade XIII standing. Text-books: Cochran, *A Practical German Review Grammar* (Prentice-Hall); Kany and Sachs, *Advanced German Conversation* (Heath); Diamond and Uhlendorf, *Mitten im Leben* (Holt); Schiller, *Wilhelm Tell* (Holt); Röseler, *Deutsche Novellen des 19. Jahrhunderts* (Holt).

Lectures—Monday, Wednesday, Friday at 10.

Professor LAIRD

GERMAN 10. *German Cultural History and Literature. Composition and Translation.*

Prerequisite—GERMAN 2. By special permission GERMAN 2 and 10 may be taken in the same year. Text-books: Bithell, *Advanced German Composition* (Methuen); Jordan, *Deutsche Kulturgeschichte* (Crofts); Hebbel, *Agnes Bernauer* (Oxford); Schiller, *Jungfrau von Orleans* (Ginn); Schmidt, *Buch der Balladen* (Bertelsmann).

Lectures—Monday, Wednesday, Friday at 2.30

Professors LAIRD and EICHNER

GERMAN 12. *Nineteenth Century Drama. Advanced Composition.*

Prerequisite—GERMAN 2. GERMAN 10 must be taken either before this course, or in the same year with it. Text-books: Campbell, *German Plays of the Nineteenth Century* (Crofts); Hauptmann, *Die Weber* (Cambridge); Puckett, *Contemporary German Prose* (Holt).

Not offered in 1953-4.

GERMAN 14. *Modern Literature, 1880-1945. Advanced Composition.*

Prerequisite—GERMAN 2. GERMAN 10 must be taken either before this course or in the same year with it. Text-books: Bruns, *Die Lese der deutschen Lyrik* (Crofts); Sudermann, *Heimat* (Heath); Hofmannsthal, *Der Tor und der Tod* (Blackwell's); Thomas Mann, *Tonio Kröger* (Blackwell's); Hermann Hesse, *Demian* (Fischer); Kafka, *Der Prozess* (Schocken); Bithell, *Advanced German Composition* (Methuen). Other readings will be assigned.

Hours to be arranged.

Professor EICHNER

GERMAN 15. *Goethe and Schiller.*

Prerequisites—GERMAN 10, and either 12 or 14. Text-books: Goethe, *Poems* (Crofts); Götz von Berlichingen (Ginn); *Die Leiden des jungen Werther* (Reclam. 67/67a); *Egmont* (Ginn); *Iphigenie auf Tauris* (Holt); *Torquato Tasso* (Reclam. 88); Schiller, *Die Räuber* (Reclam. 15/15a); *Kabale und Liebe* (Holt); *Don Carlos* (Oxford); *Wallenstein* (Holt); *Maria Stuart* (Holt).

Lectures—Tuesday, Thursday, Saturday at 9

Professor LAIRD

GERMAN 16. *German Literature of the Early Nineteenth Century.*

Prerequisites—GERMAN 10, and either 12 or 14. Text-books: Goethe, *Faust I and II*, ed. Calvin Thomas (Heath); Bruns, *Die Lese der deutschen Lyrik* (Crofts); Novalis, *Die Lehrlinge zu Sais*; Klingsohrs *Märchen* (Parnass); Hoffmann, *Das Fräulein von Scudery* (Parnass); Kleist, *Michael Kohlhaas* (Parnass); Eichendorff, *Aus dem Leben eines Taugenichts* (Parnass); Heine, *Harzreise*. Other readings will be assigned.

Not offered in 1953-4.

GERMAN 20. *Introduction to Middle High German.*

This course is intended only for those students who propose to take a full major in German.

Prerequisite—GERMAN 10. Text-book: Bachmann, *Mittelhochdeutsches Lesebuch* (Beer).

Hours to be arranged.

Professor LAIRD

Reading Courses

A reading course may be taken either during the winter session or during the summer. Students are asked to discuss these courses with the instructors as soon as possible after registering.

GERMAN R1. *Deutsche Geschichte.*

Tenbrock, *Deutsche Geschichte*, 4. Aufl.; Tacitus, *Germania*; Steinhausen, *Geschichte der deutschen Kultur* (Kap. VI, VII, IX); Bithell, *A Companion to German Studies*; Treitschke, *Deutsche Geschichte im 19. Jahrhundert*, "Einleitung"; Bruford, *Germany in the 18th Century*; Brandenburg, *Die deutsche Revolution 1848*; Gooch, *Germany*; Spengler, *Der Untergang des Abendlandes*, "Einleitung".

Professor LAIRD

GERMAN R2. *Die deutsche Novelle.*

Bennett, *A History of the German "Novelle"*; Goethe, *Novelle*; Kleist, *Michael Kohlhaas*; Tieck, *Der blonde Eckbert*; Chamisso, *Peter Schlemihl*; Brentano, *Vom braven Kasperl und vom schönen Annerl*; Eichendorff, *Aus dem Leben eines Taugenichts*; Immerman, *Der Oberhof*; Droste-Hülshoff, *Die Judenbuche*; Grillparzer, *Der arme Spielmann*; O. Ludwig, *Zwischen Himmel und Erde*; Heyse, *L'Arrabiata*; Keller, *Der Landvogt von Greifensee*; Fontane, *Grete Minde*; C. F. Meyer, *Der Heilige*; Storm, *Der Schimmelreiter*; Thomas Mann, *Der Tod in Venedig*.

Nachschlagebücher: Merker und Stammler, *Reallexikon der deutschen Literaturgeschichte*; Eloesser, *Die deutsche Literatur von der Romantik bis zur Gegenwart*; Bieber, *Der Kampf um die Tradition*; R. M. Meyer, *Die deutsche Literatur des 19. Jahrhunderts*.

Professor LAIRD

GERMAN R3. *Der deutsche Roman.*

Spiro, *Geschichte des deutschen Romans*; Grimmelshausen, *Der abenteuerliche Simplicissimus*; K. P. Moritz, *Anton Reiser*; Goethe, *Wilhelm Meisters Lehrjahre*; Keller, *Der grüne Heinrich*; Freytag, *Soll und Haben*; Raabe, *Die Chronik der Sperlingsgasse*; C. F. Meyer, *Jürg Jenatsch*; Hauptmann, *Emanuel Quint*; Thomas Mann, *Buddenbrooks*; Hesse, *Peter Camenzind*. Nachschlagebücher: H. H.

German, Hebrew, History

Borchardt, *Geschichte des Romans und der Novelle in Deutschland*; Borchardt, *Der Roman der Goethezeit*; und die unter R2 angegebenen Werke.

Professor EICHNER

GRADUATE COURSES

For information about graduate courses in German, see the *Calendar of Graduate Studies*.

Hebrew Language and Literature

Rev. S. M. GILMOUR, B.D., Ph.D., D.D., *Acting Professor*

A. D. TUSHINGHAM, B.D., Ph.D., *Lecturer*

Students proceeding to Theology may, with the permission of the Board of Studies, substitute HEBREW 1 for a course in Latin.

COURSES OF INSTRUCTION

HEBREW 1.

The aim of this class is to enable students to read any of the narrative parts of the Hebrew Scripture. The Christmas term is devoted entirely to thorough study and practice of grammar and exercises. After the Christmas vacation parts of Genesis and Samuel, or other books, will be read, in addition to the work in grammar and composition.

Text-books: Davidson, *Hebrew Grammar* (20th or later editions), pages 1-106; Kittel, *Biblia Hebraica*, or *Hebrew Bible*, issued by B. and F. Bible Society; *Lexicons*, Brown-Driver-Briggs, or Bagster.

Lectures—Tuesday, Thursday, Friday at 1.30

Dr TUSHINGHAM

HEBREW 2.

This class aims at more advanced work in the Hebrew language than that attempted in HEBREW 1. The prophetic and poetic literature of the Old Testament will be studied and lectures given on Hebrew syntax and the principles of the textual criticism of the Old Testament. Students will be practised regularly in translating English into Hebrew, both *viva voce* and in written exercises.

Text-books: Davidson, *Hebrew Grammar*, pp. 106-236; *Hebrew Syntax*; *Hebrew Bible* and *Lexicons* as in course 1.

Lectures—Tuesday, Thursday, Friday at 2.30

Dr TUSHINGHAM

History

W. E. C. HARRISON, O.B.E., M.A., *Professor*

A. R. M. LOWER, M.A., Ph.D., LL.D., F.R.S.C., *James Douglas
Professor of Canadian and Colonial History*

W. E. L. SMITH, M.C., M.A., Ph.D., *Associate Professor*

F. W. GIBSON, M.A., *Associate Professor*

ARTHUR KEPPEL-JONES, M.A., Ph.D., *Lecturer under the R. Samuel McLaughlin Trust Fund (1953-4).*

F. J. WILSON, M.A., *Senior Tutor*

Mrs H. A. ELLIOTT, B.A., *Sessional Tutor*

JOYCE CROOKS, B.A., *Research Assistant (1953-4)*

D. B. DEWAR, B.A., B. W. HODGINS, B.A., FRANCES H. PUTMAN, B.A., *R. Samuel McLaughlin Fellows (1953-4).*

MICHAEL DAFOE, B.A., *Sir James Aikins Fellow (1953-4)*

W. J. PATTERSON, B.A. and K. E. ISABELL BAKER, B.A., *Western Ontario Graduate Fellows (1953-4)*

Students reading History as one of the subjects of concentration for the General Course take HISTORY 3 (*The North Atlantic Community*), HISTORY 5 (*The Evolution of England*) and HISTORY 6 (*The Evolution of Europe*). If they wish to elect a fourth course in History, they are recommended to take HISTORY 4 (*Ancient History*). Students whose work in the general courses in History is satisfactory may take also one or more of HISTORY 12 (*Mediaeval Europe*), HISTORY 13 (*The British Empire and Commonwealth*), HISTORY 14 (*The United States*), HISTORY 24 (*The Renaissance and the Reformation*). In exceptional cases students on the General Course who have a sufficiently high standing in History may, with the permission of the department, be admitted in their final year to other advanced courses, including HISTORY 27 (*National and International Europe*).

THE HONOURS COURSE IN HISTORY

Candidates planning to take the Honours Course in History are advised to offer Grade XIII subjects as follows: English, Latin (preferred to Mathematics though such qualification is acceptable), History, French and, an option, preferably a second modern language. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree courses so as to include the subjects that they lack. If they do not offer History as a subject of Grade XIII, they may take HISTORY 3 or 5 or 6.

Candidates offering History as a subject of Grade XIII with a grade not lower than B and intending to apply for admission to honours with History as major or minor may, in their first year, take HISTORY 12 concurrently with HISTORY 3 or 5 or 6. For such students a normal first year programme is ENGLISH 2 (*A General Introduction to English Literature*), PHILOSOPHY 1 (*Introduction to Philosophy*), HISTORY 3 or 5 or 6,

History

and HISTORY 12, and a course in the minor. Students who expect to choose the Canadian and Commonwealth option, as set forth below, are advised to take HISTORY 3; those likely to select the British and European group are advised to take HISTORY 5 or 6.

Honours in History may be taken either in British and European History or in Canadian and Commonwealth History.

The programme for the degree is as follows:

(a) The Major

Britain and Europe

Canada and Commonwealth

HISTORY 3—*The North Atlantic Community*; or HISTORY 3 or 5 or 6

5—*The Evolution of England*; or

6—*The Evolution of Europe*

HISTORY 12—*Mediaeval Europe*

13—*The British Empire and Commonwealth*

18a—*England under the Tudors*

18b—*England under the Stuarts*

19—*Modern Britain*

HISTORY 27—*National and International Europe*

HISTORY 14—*The United States*

20—*Canada: The Two Cultures*

One course selected from

HISTORY 14—*The United States*

16—*Mediaeval Britain*

24—*The Renaissance and the Reformation*

With ANCIENT HISTORY (*A Survey of Greek and Roman Society*) or LATIN 2 (*Translation and Interpretation of prescribed texts, sight translation, prose composition*). The relevance of Latin will be clear to students interested in the mediaeval period.

HISTORY R6 (*The Study and Interpretation of History*) and two other reading courses selected from HISTORY R1 (*The Middle Ages*), HISTORY R3 (*British Foreign Policy*), HISTORY R4 (*Anglo-American and Canadian-American Relations*), and HISTORY R5 (*Historical Geography: The Relation of History and Geography*).

(b) The Minor

ENGLISH 2 or 5, 10, any two chosen from 15, 19, 20, 22; or

FRENCH 2, 10, 11, 14; or

GERMAN 2, 10, 12, 14; or

PHILOSOPHY 1, 10, 27 and two advanced courses (see page 158); or

ECONOMICS 4, 10, 12, and two further courses (MATHEMATICS 3a may be offered as a half-course in Economics); or

Political Science: POLITICS 2, 30, 31, and two courses in Politics selected from POLITICS 32, 36, 37, 39.

(c) Compulsory general courses to complete the work for a degree: PHILOSOPHY 1, ENGLISH 2, a science or a language. If the candidate has Grade XIII standing in both a language and a science he may use the third general course as a free option. Students who may wish later to proceed to graduate studies are advised to take a second modern language, preferably German.

(d) Two general examinations in History.

High School Teaching Certificate in History

Candidates for admission to the course of study leading to the Interim High School Assistant's Certificate, Type A, in History at the Ontario College of Education take the regular Honours Course in History with a minor in Political and Economic Science made up of ECONOMICS 4 (*Introduction to Economics*), POLITICS 2 (*Introduction to Politics*), ECONOMICS 10 (*Principles of Economics*), and two further courses in Politics and Economics. GEOLOGY 1 (*Physiography and General Geology*) is also prescribed with HISTORY R5 (*The Relation of History and Geography*) and R6 (*The Study and Interpretation of History*) included among the reading courses.

Minors in History

(a) A minor in History normally consists of either HISTORY 3 or 5 or 6; 12, 13 or 19; and one other course numbered over 10.

(b) Candidates for admission to the course of study leading to the Interim High School Assistant's Certificate, Type A, in English at the Ontario College of Education take the regular Honours Course in English with a minor in Social History made up as follows: HISTORY 3 or 5 or 6; 12, and two courses to be selected from HISTORY 14, 16, 18A, 18B, 19, 20, 24. See p. 90, Course for the Teaching Certificate in English.

General Honours

Students selecting History as one of their subjects for General Honours will take the courses prescribed for a minor in History (see (a) above), with the addition of HISTORY R6.

For information about scholarships in History, see page 53.

History

COURSES IN HISTORY

HISTORY 3. *The North Atlantic Community.*

The evolution of Canada and the United States in the North Atlantic Community.

Basic Texts: A. R. M. Lower, *Colony to Nation: A History of Canada* (Longmans); and another, to be assigned, in American history. Extramural students are expected to acquire additional books, a list of which will be sent on request.

Lectures—Monday, Wednesday, Friday at 11

Professors LOWER and GIBSON

HISTORY 4. *Ancient History.*

This course is given by the Department of Classics. The prescription appears on page 117.

HISTORY 5. *The Evolution of England.*

A study of free institutions.

Basic texts: G. M. Trevelyan, *History of England*, Third Edition (Longmans); W. E. Lunt, *History of England*, Third edition (Harper); G. B. Adams, *Constitutional History of England*, Revised edition (Holt). Other reading to be assigned.

Lectures—Monday, Wednesday, Friday at 10

Professor GIBSON

HISTORY 6. *The Evolution of Europe.*

An historical introduction to contemporary Europe.

Basic texts: H. A. L. Fisher, *A History of Europe* (Longmans); J. H. Robinson and J. T. Shotwell, *The History of Western Europe* (Brief edition, revised and enlarged, Ginn); J. H. Robinson, *Readings in European History*, Vols. I and II (Ginn); J. H. Breasted, C. F. Huth, and S. B. Harding, *European History Atlas* (Denoyer-Geppert Co., Chicago). Other reading to be assigned. Extramural students are expected to acquire additional books.

Lectures—Tuesday and Thursday at 11, Wednesday at 2.30

HISTORY 12. *Mediaeval Europe.*

A study of the evolution of Western civilization during this period.

Basic texts: Carl Stephenson, *Mediaeval History* (Harper); J. B. Ross and M. M. McLaughlin, *The Mediaeval Reader* (Macmillan). Other reading to be assigned.

Lectures—Wednesday and Friday at 10, Tuesday at 1.30

Professor SMITH

HISTORY 13. *The British Empire and Commonwealth.*

Basic texts: J. A. Williamson, *The British Empire and Commonwealth* (Macmillan) or C. E. Carrington, *The British Overseas* (Cambridge University Press). Other reading to be assigned.

Lectures—Monday, Wednesday, Friday at 10

Professors GIBSON and LOWER

HISTORY 14. *The United States.*

Studies in the national period.

Texts and reading to be assigned.

Lectures—Tuesday and Thursday at 10, a third hour to be arranged

Professor GIBSON

HISTORY 16. *Mediaeval England.*

A seminar in the constitutional and cultural aspects of the subject to 1485, open to students who have been admitted to honours.

Basic texts: G. M. Trevelyan, *History of England* (Longmans); J. E. A. Jolliffe, *The Constitutional History of Mediaeval England* (Macmillan); C. Stephenson and F. G. Marcham, *Documents of English Constitutional History*, Revised edition (Harper). Other reading to be assigned.

Not offered in 1953-4.

Professor SMITH

HISTORY 18A. *England under the Tudors.*

This course is open only to students who have been admitted to honours and will normally be taken in their first year of honours work.

Basic texts: S. T. Bindoff, *Tudor England* (Penguin Books); C. Stephenson and F. G. Marcham, *Documents of English Constitutional History* (Harper); J. B. Black, *The Reign of Elizabeth* (Oxford University Press); D. L. Keir, *A Constitutional History of Modern Britain*, Revised edition (Macmillan). Other reading to be assigned.

Lectures—Tuesday and Thursday at 2.30-4

Professor HARRISON

HISTORY 18B. *England under the Stuarts.*

This course is open only to students who have been admitted to honours and will normally be taken in their first year of honours work.

Basic texts: G. M. Trevelyan, *England under the Stuarts* (Methuen); C. Stephenson and F. G. Marcham, *Documents of English Constitutional History* (Harper); D. L. Keir, *A Constitutional History of Modern Britain*, Revised edition (Macmillan). Other reading to be assigned.

Lectures—Tuesday and Thursday at 2.30-4

HISTORY 19. *Modern Britain.*

An historical introduction to the politics and problems of contemporary Britain.

Basic Texts: Gilbert Slater, *The Growth of Modern England* (Macmillan); Sir John Marriott, *Modern England, 1885-1945* (Saunders); D. L. Keir, *A Constitutional History of Modern Britain*, Revised edition (Macmillan). Other reading to be assigned.

Lectures—Monday, 2.30-4.30, Wednesday at 9

Professor HARRISON

HISTORY 20. *Canada: The Two Cultures.*

This course will attempt an explanation of French Canada in the history of Canada. A reading knowledge of French is desirable.

Reading to be assigned.

Lectures—Tuesday, Thursday, Saturday at 10

Professor LOWER

HISTORY 24. *The Renaissance and the Reformation.*

The emphasis in lectures and discussions will be on the cultural and religious aspects of the subject.

Basic text: Henry S. Lucas, *The Renaissance and the Reformation* (Harper). Other reading to be assigned.

Lectures—Tuesday and Thursday at 10, Friday at 1.30

HISTORY 27. *National and International Europe.*

An historical approach to the problems of contemporary Europe.

Basic texts: A. J. Grant and H. W. V. Temperley, *Europe in the Nineteenth*

History

and *Twentieth Centuries, 1789-1950*, 6th ed., revised and edited by Lillian M. Penson (Longmans); E. H. Carr, *The Twenty Years' Crisis, 1919-1939: An Introduction to the Study of International Relations* (Macmillan); Hans J. Morgenthau, *Politics Among Nations: The Struggle for Power and Peace* (McClelland and Stewart). Other readings to be assigned.

Lectures—Monday, Wednesday, Friday at 11

Professor HARRISON

Reading Courses

HISTORY R1. *The Middle Ages*.

G. G. Coulton, *The Mediaeval Scene*; Eileen Power, *Mediaeval People*; J. Huizinga, *The Waning of the Middle Ages*; Henri Pirenne, *Mediaeval Cities*; C. H. Haskins, *The Rise of the Universities*; C. G. Crump and E. F. Jacob (Ed.), *The Legacy of the Middle Ages*; F. J. C. Hearnshaw, *The Social and Political Ideas of some Great Mediaeval Thinkers*; Henri Pirenne, *A History of Europe from the Invasions to the Sixteenth Century*.

HISTORY R3. *British Foreign Policy*.

R. W. Seton-Watson, *Britain in Europe, 1789-1914: A Survey of Foreign Policy*; Sir John Tilley and Stephen Gaselee, *The Foreign Office*; Harold Nicolson, *Diplomacy*; A. F. Pribram, *England and the International Policy of the European Great Powers, 1871-1914*; G. M. Trevelyan, *Grey of Falloden*; Viscount Grey, *Twenty-five years*; Harold Nicolson, *Sir Arthur Nicolson: First Lord Carnock*; Viscount Haldane, *Autobiography*; Winston Churchill, *The World Crisis 1911-1914*, Vol. I; James Joll (Ed.), *Britain and Europe: Pitt to Churchill, 1793-1940*.

HISTORY R4. *Anglo-American and Canadian-American Relations*.

J. B. Brebner, *North Atlantic Triangle*; A. L. Burt, *The United States, Great Britain and British North America: From the Revolution to the Establishment of Peace after the War of 1812*; L. B. Shippee, *Canadian-American Relations 1849-1874*; L. M. Gelber, *The Rise of Anglo-American Friendship: A Study in World Politics, 1898-1906*; H. L. Keenleyside, *Canada and the United States* (rev. ed. 1952); P. E. Corbett, *The Settlement of Canadian-American Disputes*; W. B. Munro, *American Influence on Canadian Government*; R. MacG. Dawson, *Canada in World Affairs 1936-1941*; F. H. Soward, *Canada in World Affairs 1944-46*.

HISTORY R5. *The Relation of Geography and History*.

This course consists in a study of the relation of history and geography especially with respect to the topics indicated below. The books listed are to be read for their general point of view, their illustrative value or the thesis they set forth, rather than for the detailed factual information they contain. But in all cases where general points are made, students should master ample supporting detail.

Topics: 1. Discovery and Exploration. 2. International Relations and Geography. 3. Geography in Canadian History: geography, exploration and the fur trade; geography and the struggle for North America; geographical factors in the relations between Canada and the United States.

1. Lloyd A. Brown, *The Story of Maps*; The Norse Sagas (The principal sagas are to be found in any of the following: A. M. Reeves, *The Finding of Vineland the Good*, pp. 19-84; Olson and Bourne, *The Northmen, Columbus and*

Cabot, pp. 14-67; G. M. Gathorne-Hardy, *The Norse Discoverers of America*, pp. 1-73; E. F. Gray, *Lief Erikson, Discoverer of America*, pp. 24-71), S. E. Morison, *Admiral of the Ocean Sea: A Life of Christopher Columbus*; Champlain's *Voyages, 1604-1616*; Francis Parkman, *LaSalle and the Discovery of the Great West*; Holland Rose, *Man and the Sea* (a general, over-all view).

2. Andreas Dorpalen, *The World of General Haushofer: Geopolitics in Action*, Chapters II and III; Julian S. Corbett, *England in the Seven Years' War: A Study in Combined Strategy*; Admiral A. T. Mahan, *The Influence of Sea-Power upon History, 1660-1783*, opening chapters; Mahan, *The Panama Canal and Sea-Power in the Pacific*, a short essay in *Armaments and Arbitration*; Halford A. MacKinder, *Democratic Ideals and Reality*; G. S. Graham, *Empire of the North Atlantic*; R. G. Albion, *Forests and Sea Power*. Introduction and Chapters III-VII.

3. Griffith Taylor, *Canada, A Study of Cool Continental Environments and their Effect on British and French Settlement*; A. R. M. Lower, *Colony to Nation*, Chapters II, VIII, XI, XII, XV, XVI; Lower, *Geographical Determinants in Canadian History*, in *Essays in Canadian History* ed. R. Flenley, or Lower, *Canada, Nation and Neighbour*, Chapter III; H. A. Innis, *The Fur Trade in Canada*.

HISTORY R6. *The Study and Interpretation of History.*

Allan Nevins, *The Gateway to History*; A. L. Rowse, *The Use of History*; R. G. Collingwood, *The Idea of History*; H. Butterfield, *Christianity and History*; Henri Sée, *The Economic Interpretation of History*; G. M. Trevelyan, *An Autobiography and Other Essays*; Arnold J. Toynbee, *A Study of History*; Abridgement of Volumes I-VI by D. C. Somerville; Emery Neff, *The Poetry of History: The Contribution of Literature and Literary Scholarship to the Writing of History Since Voltaire*; Pieter Geyl, *Napoleon: For and Against*; C. H. Williams, *The Modern Historian*; J. R. M. Butler, *The Present Need for History*; Joseph R. Strayer (Ed.), *The Interpretation of History*; E. L. Woodward, *British Historians*.

GRADUATE COURSES

HISTORY 30. *The Graduate Seminar.*

A seminar for graduate students on the study and writing of History. Two hours a week at times to be arranged. Professor LOWER

HISTORY 31. *Advanced Studies in Canadian History.*

A seminar combining discussion of historical methods and bibliography, and problems of interpretation in Canadian history, with reports by students on selected topics.

Readings on the period will be assigned, and other material in the University's collection of documents will be used in preparing the reports.

Seminars—Tuesday and Thursday at 3.30

Professor LOWER

GRADUATE STUDIES

Information on facilities for graduate work in History is published in the *Calendar of Graduate Studies*.

Industrial Relations

J. C. CAMERON, M. Com., *Professor*

C. H. CURTIS, M.A., *Associate Professor*

The Department of Industrial Relations was established in 1944 to continue the work begun in 1937 by the Industrial Relations Section (a section of the School of Commerce and Administration).

The department collects data respecting policies, programmes and experience in employer-employee relations, keeps the material up-to-date and classifies it so that it is readily available to students, employers, labour organizations and governments; and collects current information in the industrial and social security fields. It keeps in touch with industrial and labour union organizations so that it may study actual developments. The Department gives instruction to students in the Department of Political and Economic Science, the School of Commerce, the Faculty of Applied Science, and the School of Nursing; prepares reports on subjects of immediate and vital interest; and holds conferences and short courses for business executives, personnel managers, industrial relations managers and labour leaders. Thus the department combines the work of a library, a clearing house of information, and a research bureau. It also participates in the University programme of instruction (intramural and extramural) and provides a centre for the discussion of recent developments.

Commerce students who wish to specialize in Industrial Relations will take the following courses offered by the Department of Political and Economic Science and the School of Commerce:

ECONOMICS 23—*Industrial Relations*.

COMMERCE 50—*Industrial Organization and Management*.

COMMERCE 59—*Thesis in the field of Industrial Relations*.

The department is prepared to give special courses to students who wish to do advanced work in industrial relations.

For information about scholarships in Industrial Relations see page For information about professional courses write to the Head of the Department.

Mathematics

R. L. JEFFERY, M.A., Ph.D., D.Sc., F.R.S.C.,

The N. F. Dupuis Professor of Mathematics

N. MILLER, M.A., Ph.D., *Professor*

A. VIBERT DOUGLAS, M.B.E., M.Sc., Ph.D., F.R.A.S.,

Acting Professor of Astronomy

F. M. WOOD, M.A., B.Sc., *Professor*
 I. HALPERIN, M.A., Ph.D., F.R.S.C., *Professor*
 G. L. EDGETT, M.A., Ph.D., *Associate Professor*
 H. W. ELLIS, M.A., Ph.D., *Assistant Professor*
 J. G. LAROCQUE, B.Sc., H. F. TROTTER, B.A., *Teaching Fellows*

MATHEMATICS 1, 2, 3A and 7B, and ASTRONOMY 1 are general courses, and are open to all who have passed the prerequisites.

Students offering Mathematics as one of the subjects of concentration on the General Course ordinarily take MATHEMATICS 2 (*Differential and Integral Calculus*), MATHEMATICS 3A (*Applied Statistics*), MATHEMATICS 7B (*Mathematics of Investment*) and ASTRONOMY 1 (*Descriptive Astronomy*). If they maintain satisfactory standing in MATHEMATICS 2, they may, with the consent of the department, take honours courses in Mathematics in place of MATHEMATICS 3A, 7B and ASTRONOMY 1. Students who have obtained credit in MATHEMATICS 2, 10A, and 11B, and are not proceeding with the Honours Course, may count these towards a group for the General degree in Arts.

Students are advised not to attempt an honours course in Mathematics unless they have obtained high standing in the preceding pass course. Grade B in such a course is the minimum standing on which a student may proceed.

Students who have at least Grade B in MATHEMATICS 1, or second class in Mathematics of Honour Matriculation, and who intend to enter the Honours Course in Mathematics should take MATHEMATICS 2, MATHEMATICS 10A (*Algebra*) and MATHEMATICS 11B (*Analytic Geometry*) in the same year. They must obtain a standing of at least Grade B in these courses if they wish to proceed.

For information about the course of study leading to the Interim High School Assistant's Certificate, Type A, in Mathematics and in Mathematics and Physics at the Ontario College of Education, see page 90.

Candidates for entrance to the University, who expect to take at the university any course in mathematics beyond MATHEMATICS 1, should include in their Grade XIII programme Algebra, Geometry, and Trigonometry.

THE HONOURS COURSE IN MATHEMATICS

Candidates planning to take the Honours Course in Mathematics are advised to offer Grade XIII subjects as follows: English, Mathematics (3 papers), Physics, a language, a fifth subject which may be a second science,

Mathematics

a second language or History. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

The programme for the degree is as follows:

(a) The Major

MATHEMATICS 2—*Differential and Integral Calculus*

10A—*Algebra*

11B—*Analytic Geometry*

12A—*Determinants and Theory of Equations*

13—*Calculus and Differential Equations*

15B—*Analytic Solid Geometry*

19—*Advanced Calculus*

20—*Probability and Statistics*

22—*Theory of Functions of a Complex Variable*

23—*The Calculus of Finite Differences, and Life Contingencies*

MATHEMATICS R1

R2

R3

On the advice of the department graduate course MATHEMATICS 101, or 103, may replace MATHEMATICS 23.

(b) The Minor

ECONOMICS 4, 10, 12, and two further courses (MATHEMATICS 3A may be offered as a half-course in Economics); or

PHYSICS 2, 11, 10B, 12A, 13B, 14A.

A candidate who wishes to take some other subject as minor, may do so with the consent of the Department of Mathematics.

(c) Compulsory general courses to complete the work for a degree: ENGLISH 2, PHILOSOPHY 1, a language. If the candidate has Grade XIII standing in a language he may take a free option as the third general course.

(d) Two general examinations in Mathematics.

The work for a major in Mathematics is normally covered in four years provided that MATHEMATICS 1 or the Mathematics of Honour Matriculation has been taken previously. The normal distribution of the work over four years is as follows:

First Year MATHEMATICS 2, 10A, 11B.

Second Year MATHEMATICS 13, 12A, 15B and R1.

Third Year MATHEMATICS 19, 20 or 23, and R2.

Fourth Year MATHEMATICS 22, 20 or 23, and R3.

It is advisable for the student to aim at completing the minor subject at least one year before the time of graduation.

Minors in Mathematics

When Mathematics is the minor associated with Physics as major, the minor consists of MATHEMATICS 2, 10A, 11B, 13, 19.

When Mathematics is the minor associated with Economics, Philosophy or Psychology as major, the minor consists of MATHEMATICS 2, 10A, 11B, 13, and either 19 or 20.

General Honours Course

When Mathematics is one of the three special subjects on the General Honours Course (page 87), the prescription of work is as follows: MATHEMATICS 2, 10A, 11B, 13, 12A, 15B, R1.

For information about scholarships in Mathematics, see pages 56, 57.

COURSES OF INSTRUCTION

MATHEMATICS 1. *Trigonometry, Analytic Geometry and Algebra.*

McGraw-Hill, *Five-place Logarithms and Trigonometric Tables*. Other texts to be prescribed.

Lectures—Tuesday, Thursday, Saturday at 9

MATHEMATICS 2. *Differential and Integral Calculus.*

Prerequisite—MATHEMATICS 1. Text-book: R. L. Jeffery, *Elementary Calculus*.

Lectures—Monday, Wednesday, Friday at 9

Tuesday, Thursday, Saturday at 10

Professor JEFFERY

MATHEMATICS 3A. *Applied Statistics.*

A general introduction to statistics.

Prerequisite—MATHEMATICS 1 or equivalent. Text-book: Mode, *Elements of Statistics*, 2nd edn. (Prentice-Hall).

Lectures—Monday, Wednesday, Friday at 10

Professor EDGETT

MATHEMATICS 3B. *Applied Statistics.*

This course is a continuation of MATHEMATICS 3A. It includes an elementary study of: Chi-Square, Analysis of Variance, Quality Control.

Text: To be announced.

Lectures—Three times per week, hours to be arranged.

Professor EDGETT

MATHEMATICS 7B. *Mathematics of Investment.*

Prerequisite—MATHEMATICS 1. Text-book: Hart, *Mathematics of Investment*, with tables (Heath).

Lectures—Monday, Wednesday, Friday at 10

Professor EDGETT

Mathematics

ASTRONOMY 1. *A Course in Descriptive Astronomy.*

Baker, *Astronomy*, 4th edn., (van Nostrand); Kingston, *Star Guide*.

Lectures—Monday, Wednesday, Friday at 9

Professor DOUGLAS

MATHEMATICS 10A. *Algebra.*

Prerequisite—MATHEMATICS 1. Text-book: Rosenbach & Whitman, *College Algebra* (Ginn); supplemented by mimeographed notes.

Lectures—Monday, Wednesday, Friday at 11

Professor MILLER

MATHEMATICS 11B. *Analytic Geometry.*

Sisam, *Analytic Geometry* (Holt), with supplementary material.

Lectures—Monday, Wednesday, Friday at 11

Professor MILLER

MATHEMATICS 12A. *Determinants and Theory of Equations.*

Prerequisites—MATHEMATICS 2, 10A.

Lectures—Monday, Wednesday, Friday at 8

Professor HALPERIN

MATHEMATICS 13. *Calculus and Differential Equations.*

Granville, Smith & Longley, *Elements of Differential and Integral Calculus*, revised edn. (Ginn); Morris & Brown, *Differential Equations*, revised edn. (Prentice-Hall).

Lectures—Tuesday, Thursday, Saturday at 8

Professor ELLIS

MATHEMATICS 15B. *Analytic Solid Geometry.*

Open to students who have taken MATHEMATICS 12A.

Lectures—Monday, Wednesday, Friday at 8

Professor HALPERIN

MATHEMATICS 19. *Advanced Calculus.*

Sokolnikoff, *Advanced Calculus*.

Lectures—Tuesday, Thursday, Saturday at 8

Professor MILLER

MATHEMATICS 20. *Probability and Statistics.*

Uspensky, *Introduction to Mathematical Probability* (McGraw-Hill); Hoel, *Introduction to Mathematical Statistics* (Wiley).

Lectures—Tuesday, Thursday, Saturday at 9

Professor EDGETT

MATHEMATICS 22. *Theory of Functions of a Complex Variable. The Laplace Transform.*

R. V. Churchill, *Introduction to Complex Variables and Applications* (McGraw-Hill).

Lectures—Monday, Wednesday, Friday at 9 Professors JEFFERY and WOOD

MATHEMATICS 23. *The Calculus of Finite Differences, and Life Contingencies.*

Freeman, Part II, *Actuarial Mathematics* (The Actuarial Society of America); Fort, *Finite Differences* (Oxford University Press); Spurgeon, *Life Contingencies* (The Actuarial Society of America).

Lectures—Tuesday, Thursday, Saturday at 9

Professor EDGETT

Reading Courses

MATHEMATICS R1.

J. S. Frame, *Solid Geometry* (McGraw-Hill). A mimeographed set of problems will be supplied by the department. From his reading the student should acquire a knowledge of the theorems of the subject and skill in the solution of problems.

MATHEMATICS R2.

Courant & Robbins, *What is Mathematics?* (Oxford University Press).

MATHEMATICS R3.

H. N. Wright, *Theory of Numbers* (Wiley).

GRADUATE COURSES

For information about graduate courses in Mathematics, see the *Calendar of Graduate Studies*.

Music

GRAHAM GEORGE, Mus. D., *Associate Professor*

MUSIC 1, 2 and 3 may be counted towards the General B.A. degree either as a group or as individual free options; towards the degree of Honours B.A. as free options. MUSIC 1 is normally prerequisite to MUSIC 2 and MUSIC 3, but students who have passed a recognized course outlining musical history may be admitted to MUSIC 2 or 3.

On recommendation of the departments concerned, students may apply to the Faculty of Arts for permission to combine courses in Fine Arts (Music, Drama, Art) to make up a group towards the General B.A. degree. Students may not register in a group of combined Fine Arts courses without the consent of the departments concerned.

COURSES OF INSTRUCTION

MUSIC 1. *An Outline of the History of Music.*

A study of some important phases in the development of musical forms and styles. Origins: sixteenth century polyphony and the music of the dance; the developments of the seventeenth century; Bach and his contemporaries; the music of Haydn, Mozart and Beethoven; the Romantic period. This study is carried on aurally and technical knowledge of music is not a prerequisite.

Text-book: R. O. Morris, *The Structure of Music* (Oxford).

A two-hour listening period a week is provided to give students opportunity for analytical listening, Thursday, 2.30-4.30.

Lectures—Monday at 2.30, Wednesday and Friday at 4.30.

MUSIC 2. *The Viennese Period.*

An aural study of the music of Haydn, Mozart and Beethoven, with special attention to the principles of key-structure which underlie their work.

Mathematics, Philosophy

Text-book: D. F. Tovey, *Beethoven* (Oxford).

A two-hour listening period a week is provided for analytical listening, time to be arranged.

Hours to be arranged.

MUSIC 3. *The Nineteenth and Twentieth Centuries.*

(a) An aural study of the music of the nineteenth century, showing the alteration of emphasis from expression by means of structure to expression through harmonic and instrumental colour. (b) The gradual dissipation of the sense of key-centre, and the emergence of the twelve-tone scale as the basis of a new group of idioms. Works of Schoenberg, Bartok, Hindemith and others are discussed as representing the characteristics of contemporary style.

Text-book: Moscoe Carner, *A Study of Twentieth Century Harmony* (Joseph Williams).

A two-hour listening period a week is provided for analytical listening, time to be arranged.

Hours to be arranged.

Philosophy

A. R. C. DUNCAN, M.A., *The John and*

Ella G. Charlton Professor of Philosophy

H. M. ESTALL, M.A., Ph.D., *Associate Professor*

W. B. CARTER, M.A., *Lecturer*

PHILOSOPHY 1 (*Introduction to Philosophy*) is prerequisite to all later courses in Philosophy except PHILOSOPHY 5 (*Types of Philosophy*). PHILOSOPHY 1 is ordinarily taken in the first year. If, however, it cannot be worked into the first year programme, students will take instead PHILOSOPHY 5 in a later year.

Students choosing Philosophy as one of the main subjects on the General Course take PHILOSOPHY 1, 5, and PHILOSOPHY 7 (*History of Philosophy*).

For information about scholarships in Philosophy, see page 53.

THE HONOURS COURSE IN PHILOSOPHY

Candidates planning to take the Honours Course in Philosophy are advised to offer Grade XIII subjects as follows: English, Mathematics (3 papers), a language, a science, and a fifth subject which may be a second language, a second science or History. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

The programme for the degree is as follows:

(a) The Major

- PHILOSOPHY 1—*Introduction to Philosophy*
- PSYCHOLOGY 2—*An Elementary Survey of Mental Life*
- PHILOSOPHY 10—*Problems of Philosophy*
- 12—*History of Ancient Philosophy*
- 14—*History of Modern Philosophy*
- 27—*Moral Philosophy*
- 29—*Logic*
- Two of PHILOSOPHY 15—*Recent Philosophy*
- 23—*Political Philosophy*
- 25—*Aesthetics*
- 31—*Seminar Course*
- 33—*Leibniz and Kant*

Three of the six reading courses

PHILOSOPHY 12 and 14, and PHILOSOPHY 27 and 29 are offered in alternate years. PHILOSOPHY 31 differs in content from year to year and may be taken twice.

(b) The Minor

- HISTORY 3, 12, 13 or 19, and one other course numbered over 10; or
- POLITICS 2, 30, 31, and two of 32, 36, 37, 39; or
- PSYCHOLOGY 2, 10A, 10B, 11, and two other courses in PSYCHOLOGY;
- or
- MATHEMATICS 2, 10A, 11B, 13, and one of 19, 20.

Other minors may be selected in consultation with the department.

(c) Compulsory general courses to complete the work for degree. With History, Mathematics or Psychology as minor: ENGLISH 2, a language or a science. If the candidate has Grade XIII standing in both a language and a science he may take a free option as the second general course. With Politics as minor: ENGLISH 2.

(d) Two general examinations in Philosophy.

The Course in Honours Philosophy requires four years and is normally arranged as follows:

- First Year* PHILOSOPHY 1, PSYCHOLOGY 2.
- Second Year* PHILOSOPHY 10, 12 or 14, a reading course, PSYCHOLOGY 2 if not already taken.
- Third Year* PHILOSOPHY 12 or 14 not taken in the second year, 27 or 29, an optional course in Philosophy, a reading course.
- Fourth Year* PHILOSOPHY 27 or 29 not taken in the third year, two optional courses in Philosophy, a reading course.

Philosophy

A minor in Philosophy is ordinarily PHILOSOPHY 1, 10, 27 and two full courses chosen from the following: PHILOSOPHY 12, 14, 15, 23, 25, 29, 31, 33, one of which must be either PHILOSOPHY 12, 14 or 15.

COURSES OF INSTRUCTION

PHILOSOPHY 1. *Introduction to Philosophy.*

A general introduction to philosophy, in which special attention will be paid to the nature of proof, the criterion of truth, the determination of standards of conduct, and the function of philosophy in the modern world.

Text-books: Stebbing, *A Modern Elementary Logic* (Methuen); Melden, *Ethical Theories* (Prentice-Hall); Macmurray, *Interpreting the Universe* (Faber).

Lectures—Monday, Wednesday, Friday at 9

Professor DUNCAN

PHILOSOPHY 5. *Types of Philosophy.*

An introductory survey of the main philosophical movements in the western world, together with an account of the main branches of philosophical study, especially logic. This course is not open to freshmen.

Text-books: Beardsley, *Practical Logic* (Prentice-Hall); Whiteley, *Introduction to Metaphysics* (Methuen).

Lectures—Monday, Wednesday, Friday at 9

Professor ESTALL

PHILOSOPHY 7. *History of Philosophy.*

A general account of the history of philosophy from the Greeks to the present day. Attention will be concentrated on a few of the more outstanding figures. First term: the philosophy of the Greeks and its impact on mediaeval Christendom. Second term: the development of modern philosophy and its interaction with scientific thought.

Lectures—Monday, Wednesday, Friday at 11

Professor DUNCAN and Mr CARTER

PHILOSOPHY 10. *Problems of Philosophy.*

A study of some of the major problems in the field of philosophy. First term: the theory of knowledge. Second term: the theory of existence.

Text-book: Price, *Thinking and Experience* (Hutchison). Recommended for study but not for purchase: N. Kemp Smith, *Prolegomena to an Idealist Theory of Knowledge*; A. E. Taylor, *Elements of Metaphysics*; John Laird, *A Study in Realism*; A. J. Ayer, *Language, Truth, and Logic*.

Lectures—Monday, Wednesday, Friday at 10

Mr CARTER

PHILOSOPHY 12. *History of Ancient Philosophy.*

A study of the four main periods of classical philosophy. First term: the pre-Socratics, Socrates, and Plato. Second term: Plato, Aristotle, and the post-Aristotelians. One of the main objects of this course will be to trace the growth of the problems which traditionally constitute the field of philosophical study and to study the manner of their transmission to the modern world.

Text-books: Milton Nahm, *Selections from Early Greek Philosophy* (Appleton-Century-Crofts); *Dialogues of Plato*, translated by Jowett (Random House); *Aristotle* (Basic Works, Random House).

Not offered in 1953-4.

PHILOSOPHY 14. *History of Modern Philosophy.*

A study of modern philosophy from Bacon to Kant with special attention to the opposition between rationalists and empiricists.

Text-book: T. V. Smith and Greene, *Descartes to Kant*. Recommended for study but not for purchase: Mellone, *The Dawn of Modern Thought*; C. R. Morris, *Locke, Berkeley, Hume*; A. E. Burt, *The Metaphysical Foundations of Modern Science*; E. W. Strong, *Procedures and Metaphysics*; N. Kemp Smith, *Philosophy of David Hume*; W. H. Walsh, *Reason and Experience*; A. C. Ewing, *A Short Commentary on Kant's Critique of Pure Reason*.

Lectures—Monday, Wednesday, Friday at 1.30

Professor ESTALL

PHILOSOPHY 15. *Recent Philosophy.*

A study of the main philosophical currents in the western world during the last hundred years. Among those whose writings will be considered are: Hegel, Marx, Kierkegaard, J. S. Mill, Nietzsche, Bergson, James, Dewey, Whitehead, Russell.

Text-books: to be announced.

Not offered in 1953-4.

PHILOSOPHY 23. *Political Philosophy.*

An examination of the principal concepts and arguments employed in political writings, past and present.

Text-books: Foster, *Masters of Political Thought, Vol. I* (Houghton-Mifflin); Jones, *Masters of Political Thought, Vol. II* (Houghton-Mifflin); Barker, *Social and Political Theory* (Oxford).

Lectures—Monday, Wednesday, Friday at 11

Professor ESTALL

PHILOSOPHY 25. *Aesthetics.*

An examination of the arguments used in aesthetic criticism.

Not offered in 1953-4.

PHILOSOPHY 27. *Moral Philosophy.*

The general approach will be as follows: (a) Critical study of the historical development of moral and social theory; (b) Examination of ethical issues in contemporary life.

Text-books: Aristotle, *Nicomachean Ethics*; Sellars and Hospers, *Readings in Ethical Theory* (Appleton-Century-Crofts).

Lectures—Monday, Wednesday, Friday at 2.30

Professor DUNCAN

PHILOSOPHY 29. *Logic.*

A study of the problems of demonstrative and problematic inference.

Text-books: Cohen and Nagel, *Logic and Scientific Method* (Harcourt, Brace); Kneale, *Induction and Probability* (Oxford University Press).

Not offered in 1953-4.

PHILOSOPHY 31. *Seminar Course.*

Systematic study of the works of some one philosopher or school. A different topic will be selected each year. Not offered in 1953-4.

PHILOSOPHY 33. *Leibniz and Kant.*

A systematic study of the logical and metaphysical aspects of the thought of Leibniz and Kant. First term: Leibniz. Second term: Kant's Critique of Pure Reason.

Philosophy, Physical Education

Text-books: Leibniz, *Selections* (Scribners); Kant, *Critique of Pure Reason* (Macmillan).

Hours to be arranged.

Mr CARTER and Professor DUNCAN

Reading Courses

PHILOSOPHY R1. *Metaphysics*.

Pepper, *World Hypotheses*; Collingwood, *Essay in Metaphysics*; Stout, *Mind and Matter*; Ryle, *Concept of Mind*.

PHILOSOPHY R2. *Ethics*.

Ross, *Foundations of Ethics*; Macbeth, *Experiments in Living*; Schlick, *Problems of Ethics*; Bergson, *Two Sources of Morality and Religion*.

PHILOSOPHY R3. *Logic*.

Mill, *System of Logic* (Books III and VI); Bosanquet, *Essentials of Logic*; Poincaré, *Foundations of Science*; Whitehead, *Introduction to Mathematics*.

PHILOSOPHY R4. *Later Philosophy of Plato*.

Cornford, *Plato and Parmenides*; A. E. Taylor, *Plato's Parmenides* (translation and introduction); Cornford, *Plato's Theory of Knowledge*; Hackforth, *Plato's Examination of Pleasure*; Ross, *Plato's Theory of Ideas*.

PHILOSOPHY R5. *Aesthetics*.

Carritt, *Introduction to Aesthetics*; Croce, *Essentials of Aesthetics*; Collingwood, *Principles of Art*; Alexander, *Beauty and Other Forms of Value*; Pepper, *Principles of Art Appreciation*.

PHILOSOPHY R6. *The History of Science*.

Butterfield, *Origins of Modern Science*; Raven, *Science and Religion*; Sherington, *Man on his Nature*; Whitehead, *Science and the Modern World*.

Substitutions in reading courses may be arranged in consultation with the department to meet the special needs of individual students.

The examination in at least one of the reading courses will take the form of an essay of approximately 8,000 words. A student may opt to write an essay in each reading course.

GRADUATE COURSES

For information about graduate courses in Philosophy, see the *Calendar of Graduate Studies*.

Physical and Health Education

F. L. BARTLETT, B.A., *Professor, and Director of the School of Physical and Health Education*

J. F. EDWARDS, M.A. (P.E.), *Associate Professor*

F. TINDALL, A.B., *Assistant Professor*

MARION ROSS, M.A., *Assistant Professor*

A. L. LENARD, B.A., B.P.H.E., *Instructor*

DOROTHY LEGGETT, M.Sc., *Instructor*

R. A. GOW, *Instructor in Swimming*

Physical Education, Physics

With the exception of those excused by the Medical Officer because of ill-health, all first year students are required to take two hours of gymnasium work per week during the whole of the school year. The work varies throughout the year and as much time as possible is spent outdoors in the early fall and spring. This consists of touch football, cross-country running, track and field, and soft-ball. Every student is given a swimming test and the non-swimmers are automatically placed in an instruction group.

Indoor work follows with cooler weather and consists of swimming, calisthenics, marching, setting-up exercises, and apparatus work on the parallel bars, the horse, the mats, and the horizontal bar. The winter term brings basketball, indoor softball, group games, and indoor track and field. Each student is encouraged to learn something about all of these activities and a wide variance of exercise is achieved.

Equivalent credit is given for attendance at regular organized swimming and life-saving classes, and for playing on university teams in track, football, hockey, water polo, gymnastics, tennis, and boxing and wrestling. Such credit *terminates with the regular scheduled programme of activities of each respective club*, when students will rejoin the weekly gymnasium classes or engage in any other of the sports listed above.

Classes for Arts Students

At the time of registration each new student must enroll in a class of physical education. For students in Arts these classes are held in the main gymnasium building as follows:

- | | |
|--------------|--------------------------------------|
| <i>Men</i> | (a) Monday and Wednesday 3.30-4.30 |
| | (b) Tuesday and Thursday 2.30-3.30 |
| | (c) Wednesday and Friday 2.30-3.30 |
| | (d) Tuesday and Thursday 3.30-4.30 |
| <i>Women</i> | (a) Monday and Wednesday 11.00-12.00 |
| | (b) Tuesday and Thursday 10.00-11.00 |
| | (c) Wednesday and Friday 2.30-3.30 |
| | (d) Tuesday and Saturday 11.00-12.00 |

Freshmen in Arts whose academic time-table conflicts with the above hours will be placed in other classes on application to the Director of Physical Education.

Physics

B. W. SARGENT, M.B.E., M.A., Ph.D., F.R.S.C.,

Professor and Head of the Department

E. E. WATSON, M.Sc., Ph.D.,

Professor and Chairman of Undergraduate Studies

H. M. CAVE, M.A., Ph.D., *Professor*

Physics

H. W. HARKNESS, B.Sc., B.A., M.Sc., Ph.D., *Professor*

D. T. ROBERTS, B.Sc., Ph.D., *Associate Professor*

W. M. MARTIN, B.Sc., Ph.D., *Assistant Professor*

L. E. H. TRAINOR, M.A., Ph.D., *Assistant Professor*

H. M. LOVE, B.Sc., Ph.D., *Assistant Professor under the R. Samuel
McLaughlin Trust Fund*

A. J. GOODJOHN, M.Sc., *Lecturer*

HELEN M. TRAINOR, M.A., *Demonstrator*

T. J. ROCK, B.A., *Robert Waddell Tutor in Physics*

PHYSICS 1 or Grade XIII Physics is prerequisite to PHYSICS 2, and PHYSICS 2 is prerequisite to all other courses in Physics. Exceptional students may take PHYSICS 2 and 11 concurrently with the consent of the Chairman of Undergraduate Studies in Physics.

Candidates offering Physics as one of the subjects of concentration on the General Course take PHYSICS 1 (*Mechanics, properties of matter, heat, wave-motion, sound, light, electricity, and magnetism*), PHYSICS 2 (*Electricity and magnetism and light*), PHYSICS 11 (*Mechanics*), if they have not included Physics in their Grade XIII programme; PHYSICS 2, 11, 13B (*Atomic Physics*), PHYSICS 14A (*Heat and Thermodynamics*), if they have offered Physics of Grade XIII as one of the subjects for admission.

THE HONOURS COURSE IN PHYSICS

Candidates planning to take the Honours Course in Physics are advised to offer Grade XIII subjects as follows: English, Mathematics (3 papers), Physics, a language, a fifth subject which should be Chemistry or Biology. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

The programme for the degree is as follows:

(a) The Major

PHYSICS 2—*Electricity and Magnetism and Light*

11—*Mechanics*

10A—*Dynamics*

12B—*Introduction to the Mathematical Theory of Electricity
and Magnetism*

13B—*Atomic Physics*

14A—*Heat and Thermodynamics*

16A—*Mechanics of Rigid and Elastic Bodies*

- 17B—*Physical Optics*
- 20B—*Electromagnetic Theory*
- 21A—*Kinetic Theory of Gases*
- R1—*Heat*
- R2—*Sound*
- R3—*Evolution of Physics*

When the minor is in Mathematics, two courses in Physics or Mathematics or another science must be taken in addition to the work prescribed above, the choice to be made after consultation with the Chairman of Undergraduate Studies in Physics. When the minor is Chemistry, the two additional courses are MATHEMATICS 2 (*Differential and Integral Calculus*) and MATHEMATICS 13 (*Calculus and Differential Equations*); when in Biology, CHEMISTRY 2 (*General Chemistry*) and CHEMISTRY 12 (*Organic Chemistry*).

(b) The Minor

MATHEMATICS 2, 10A, 11B, 13, 19; or
 CHEMISTRY 2, 11, 12, 13; or
 BIOLOGY 10, 16, 21, 26.

A candidate who wishes to take some other subject as minor may make application to the Chairman of Undergraduate Studies in Physics.

(c) Compulsory general courses to complete the work for degree: ENGLISH 2, PHILOSOPHY 1, a language. If the candidate has Grade XIII standing in a language he may take a free option as the third general course.

(d) Two general examinations in Physics.

PHYSICS IN OTHER HONOURS COURSES

For information about the General Honours Course in Science for Teachers and the course of study leading to the Interim High School Assistant's Certificates, Type A, in Mathematics and Physics and in Science at the Ontario College of Education, see page 90.

When Physics is the minor associated with Mathematics as major, the minor consists of PHYSICS 2, 11, 10A and 12B, 13B and 14A.

When Physics is the minor associated with Chemistry as major, the minor consists of PHYSICS 2, 11, 13B and 14A, and MATHEMATICS 13 (*Calculus and Differential Equations*).

When Physics is one of the three special subjects on the General Honours Course the prescription of work is as follows: PHYSICS 2, 11, 13B, 14A, R1, and MATHEMATICS 2 (*Differential and Integral Calculus*). If possible students should select MATHEMATICS 13 (*Calculus and Differential Equations*) as a free option.

Physics

For information about scholarships in Physics, see page 57.

COURSES OF INSTRUCTION

PHYSICS 1. *Mechanics, Properties of Matter, Heat, Wave-motion, Sound, Light, Electricity, and Magnetism.*

Many of the fundamental principles of Physics are discussed and illustrated by demonstrations and by experiments in the laboratory.

This course is sufficiently broad and complete to provide a satisfactory unit of knowledge for students who wish to take only a single course in Physics. The course is also sufficiently detailed and quantitative to provide an adequate background for students who intend to take further courses in Physics.

Text-book: O. M. Stewart, *Physics*, 5th edn. (Ginn).

Lectures—Tuesday, Thursday, Saturday at 11

Laboratory—Tuesday, 1.30-3.30 or Wednesday, 1.30-3.30 Professor LOVE

PHYSICS 2. *Electricity and Magnetism and Light.*

Electricity and Magnetism (First Term). An elementary quantitative treatment of electricity and magnetism. Light (Second Term). Reflection, refraction, dispersion, interference, diffraction and polarization of light are discussed from the point of view of physical optics. Some geometrical optics is included.

Prerequisite—PHYSICS 1 or Grade XIII Physics. Although not prerequisite, MATHEMATICS 2 will be found very useful in this course, even if taken concurrently. Text-books: F. W. Sears & M. W. Zemansky, *University Physics, Electricity, Magnetism and Optics* (Addison-Wesley Press); J. K. Robertson, *Introduction to Physical Optics* (Van Nostrand).

Lectures—Tuesday, Thursday, Saturday at 9

Laboratory—Thursday 1.30-3.30 or Friday 1.30-3.30

Professors WATSON and CAVE

PHYSICS 11. *Mechanics.*

Mechanics of mass points, including motion in a circle, simple harmonic motion, etc.; plane mechanics of rigid bodies; elementary elasticity and fluid flow.

Prerequisites—PHYSICS 1, PHYSICS 2, and MATHEMATICS 2. Students on an Honours Course with Grade A standing in PHYSICS 1 and Grade B standing in MATHEMATICS 2 may take PHYSICS 2 and PHYSICS 11 in the same year. Text-book: N. H. Frank, *Introduction to Mechanics and Heat* (McGraw-Hill).

Lectures—Monday at 10, Friday at 2.30

Laboratory and Problem Period—Wednesday 1.30-4.30 or 2.30-5.30

Professor CAVE

PHYSICS 10A. *Dynamics.*

Discussion of selected topics such as motion with dissipative forces, including free and forced oscillations; coupled oscillators; motion with central forces, etc.

Prerequisites—PHYSICS 2 (62 per cent) and PHYSICS 11 (55 per cent) Text-book: H. Lamb, *Dynamics* (Cambridge University Press).

Lectures—Tuesday, Thursday, Saturday at 10

Laboratory—Tuesday, 1.30-3.30

Professor CAVE

PHYSICS 12B. *Introduction to the Mathematical Theory of Electricity and Magnetism.*

The electric and magnetic fields; simple applications of the fundamental laws of electromagnetic theory; magnetic media; alternating currents, vectors methods, complex and polar operators.

Prerequisites—PHYSICS 2 (62 per cent) and PHYSICS 11 (55 per cent) Text-book: N. H. Frank, *Introduction to Electricity and Optics*, 2nd edn. (McGraw-Hill).

Lectures—Tuesday, Thursday, Saturday at 10

Laboratory—Tuesday, 1.30-3.30

Professor WATSON

PHYSICS 13B. *Atomic Physics.*

Modern developments in such branches of Physics as conduction of electricity through gases, atomic spectra, X-rays, radioactivity and nuclear physics.

Prerequisites—PHYSICS 2 (62 per cent) and MATHEMATICS 2. Text-book: F. W. Van Name, Jr., *Modern Physics* (Prentice-Hall).

Lectures—Monday, Wednesday, Friday at 11

Professor SARGENT

Laboratory—Thursday, 1.30-3.30 or 3.30-5.30

Professor CAVE

PHYSICS 14A. *Heat and Thermodynamics.*

This course is an introduction to thermodynamics, starting with a discussion of the basis of thermometry. The equations of thermodynamics are developed and applied to examples in the fields of physics, chemistry and engineering.

Prerequisites—PHYSICS 2 (62 per cent) and MATHEMATICS 2. Text-book: M.

Prerequisites—PHYSICS 2 (62 per cent.) and MATHEMATICS 2. Text-book: M. W. Zemansky, *Heat and Thermodynamics*, 3rd edn. (McGraw-Hill).

Lectures—Monday, Wednesday, Friday at 11

Laboratory—Thursday, 1.30-3.30 or 3.30-5.30

Professor ROBERTS

PHYSICS 16A. *Mechanics of Rigid and Elastic Bodies.*

Mechanics of systems of particles; Lagrangian and Hamiltonian formulations of mechanics; kinetics and dynamics of rigid body motion, tops and gyroscopes. Mechanics of deformable bodies with application to seismic waves. The methods of matrix representations of linear transformations on a vector space are developed and used in this course.

Prerequisite—PHYSICS 10A (55 per cent). Text-book: H. Goldstein, *Classical Mechanics* (Addison-Wesley Press).

Lectures—Monday, Wednesday, Friday at 11

Professor TRAINOR

PHYSICS 17B. *Physical Optics.*

The theory and phenomena of physical optics, including wave-motion, diffraction, interference spectroscopes, polarization, double refraction, and spectral series.

Prerequisite—55 per cent in each of PHYSICS 10A, 12B, and 13B.

Lectures—Tuesday, Thursday at 11, Monday at 4.30

Laboratory—Tuesday 1.30-3.30*

Professor HARKNESS

* Students registered for both PHYSICS 17B and 22 will do this laboratory work as a part of PHYSICS 22 on Thursday afternoons.

Physics

PHYSICS 20B. *Electromagnetic Theory.*

The fundamental field equations and properties are discussed, then Maxwell's equations are derived and applied to the reflection, refraction and dispersion of waves. Vector analysis and rationalized m.k.s. units are used.

Prerequisites: 55 per cent in each of PHYSICS 10A, 12B, and 13B. Textbook: J. C. Slater & N. H. Frank, *Electromagnetism* (McGraw-Hill).

Lectures—Monday, Wednesday, Friday at 11

Professor MARTIN

PHYSICS 21A. *Kinetic Theory of Gases.*

Maxwellian distribution of velocities, free path phenomena (viscosity, thermal conductivity, diffusion), Brownian movement, the quantum theory with applications to the emission and absorption of radiation and to the specific heats of gases and solids, and classical and quantum statistics.

Prerequisites—55 per cent in each of PHYSICS 10A, 12B, 13B, and 14A. Textbook: F. W. Sears, *An Introduction to Thermodynamics, the Kinetic Theory of Gases, and Statistical Mechanics*, 2nd edn. (Addison-Wesley Press).

Lectures—Tuesday and Friday at 10, Thursday at 11

Professor SARGENT

PHYSICS 22. *Advanced Laboratory Course.*

Mechanics, electricity and magnetism, optics, X-rays, radioactivity and nuclear physics. This is the equivalent of a whole lecture course and may be one of the two supporting courses when Physics is chosen as major. (See (a), pages 162-3)

Laboratory—Thursday, 1.30-4.30, and Friday, 1.30-4.30

Professors SARGENT, HARKNESS and MARTIN

Reading Courses

PHYSICS R1. *Heat.*

A. G. Worthing & D. Halliday, *Heat* (Wiley).

PHYSICS R2. *Sound.*

M. Y. Colby, *Sound Waves and Acoustics* (Holt).

PHYSICS R3. *Evolution of Physics.*

C. T. Chase, *The Evolution of Modern Physics* (Van Nostrand); A. Einstein & L. Infeld, *The Evolution of Physics* (Simon & Schuster); H. Dingle, *A Century of Science* (Hutchinson), Chapters I-X inclusive.

The principal Physics journals and books relating to the lectures and the laboratory work are kept in the library of the Physics Department and in the University Library, where they may be freely consulted by the students. Certain of these may be borrowed for limited periods by making application to the librarian in charge.

GRADUATE COURSES

For information about graduate courses in Physics, see the *Calendar of Graduate Studies*.

Physiology

G. H. ETTINGER, M.B.E., B.A., M.D., C.M., F.R.S.C., *Professor*

MARGARET E. M. SAWYER, M.A., Ph.D., *Assistant Professor*

J. D. HATCHER, M.D., Ph.D., *Assistant Professor (Markle Scholar)*

R. E. SEMPLE, M.A., Ph.D., *Assistant Professor*

Students in the Honours Course in Biochemistry, the Honours Course in Biology for Zoologists, the Course in Physical and Health Education, and the Course for Nurses qualifying for a Diploma in Teaching and Supervision are required to take PHYSIOLOGY 10. Students taking Biology as one of the subjects of concentration on the General Course may include PHYSIOLOGY 10 in the Biology prescription.

A student in an Honours Course who, having the necessary prerequisites, wishes to take PHYSIOLOGY 20 or PHYSIOLOGY 30 should consult the head of the department.

COURSES OF INSTRUCTION

PHYSIOLOGY 10. *Human Physiology.*

This course in human physiology covers, in a general way, circulation, respiration, metabolism, digestion, excretion, endocrine secretion, and the central nervous system. Consideration is given to the structure of organs and systems, and to biochemical processes as well as physiological function. Special emphasis is placed on the mechanisms involved in each case, and on their integration in the organism as a whole. In the laboratory the student carries out exercises on surviving tissues and on mammals, which illustrate the principles discussed in the lectures. These exercises are supplemented by demonstrations and films.

Text-books: Zoethout & Tuttle, *Text-book of Physiology*; Best & Taylor, *The Living Body*.

Lectures—Tuesday and Thursday at 11

Laboratory—Thursday or Friday, 1.30-4.30

Professor SAWYER

PHYSIOLOGY 20. *Medical Physiology.*

This course is taken with students in the Faculty of Medicine and lasts for thirty weeks. Topics covered include: the dynamics of muscle and nerve, the nervous system, circulation, respiration, digestion, excretion, and endocrine function. The subject is treated systematically and the lecture course is supplemented by demonstrations and by work in the laboratory. Special emphasis is laid on the applications of Physiology to clinical study. Demonstrations in Clinical Physiology are presented in conjunction with the Department of Medicine.

Prerequisites—BIOLOGY 16, BIOLOGY 20. The student must have taken, or be taking concurrently, BIOCHEMISTRY 18. Text-books: Evans, *Human Physiology*; Bell, Davidson & Scarborough, *Text-book of Physiology and Biochemistry*; Best & Taylor, *Physiological Basis of Medical Practice*.

Physics, Politics & Economics

Lectures—Monday at 10, Tuesday and Thursday at 9, Friday at 10

Laboratory—Monday or Tuesday, 1.30-5.30

Dean ETTINGER

PHYSIOLOGY 30. *Advanced Physiology.*

An advanced course for Honours and Graduate students in which a few topics are studied intensively.

Prerequisite—PHYSIOLOGY 10 or 20.

Hours to be arranged.

Professors HATCHER and SEMPLE

GRADUATE WORK

For information about graduate work in Physiology, see the *Calendar of Graduate Studies*.

Political and Economic Science

F. A. KNOX, B.A., F.R.S.C., *Professor of Economics and Head of the Department of Political and Economic Science*

R. G. H. SMAILS, B.Sc. (Econ.), F.C.A., *Professor of Commerce and Director of the School of Commerce and Administration*

C. A. CURTIS, B.A., Ph.D., F.R.S.C., *The Sir John A. Macdonald Professor of Political and Economic Science*

J. A. CORRY, LL.B., B.C.L., LL.D., F.R.S.C.,
The Hardy Professor of Political Science and Vice-Principal

J. L. CAMERON, M.Com.,
Professor and Head of the Department of Industrial Relations

J. L. MCDUGALL, M.A., *Professor of Commerce*

K. G. CRAWFORD, M.A., *Professor of Political Science and Director of the Institute of Local Government*

L. G. MACPHERSON, B.A., C.A., *Associate Professor of Commerce*

C. H. CURTIS, M.A., *Associate Professor of Industrial Relations*

M. C. URQUHART, B.A., *Associate Professor of Economics*

J. E. HODGETTS, M.A., Ph.D., *Associate Professor of Political Science*

J. E. SMYTH, M.Com., C.A., *Associate Professor of Commerce*

R. J. HAND, B.Com., M.B.A., *Assistant Professor of Commerce*

D. W. SLATER, M.A., B.Com., *Assistant Professor of Economics*

J. MEISEL, M.A., *Assistant Professor of Political Science*

For information about scholarships in Political and Economic Science, see pages 53, 54, 55 and 56.

Students taking only one course in this department may choose ECONOMICS 4 or POLITICS 2.

THE GENERAL COURSE

The Department of Political and Economic Science may be regarded as a double department for purposes of the General Course and students

may select either one or both of Economics and Politics as special subjects. Groups may be made up as follows:

- (a) ECONOMICS 4 (*Introduction to Economics*), ECONOMICS 10 (*Principles of Economics*), ECONOMICS 12 (*Money, Banking, and International Trade*).
- (b) POLITICS 2 (*Introduction to Government and Politics*), POLITICS 30 (*Elements of Political Science*), and one of POLITICS 31 (*Canadian Government and Constitutional Law*), POLITICS 39 (*Municipal Government*), SOCIOLOGY 1 (*Introduction to Sociology*).
- (c) ECONOMICS 4, POLITICS 2, and one of ECONOMICS 10, 12, ECONOMICS 13 (*Introduction to Accounting and Finance*), POLITICS 30, 31, POLITICS 36 (*Politics of Democracy*), POLITICS 39, SOCIOLOGY 1.

For entrance to courses numbered 10 or higher, in either Economics or Politics, the student must qualify by obtaining Grade B in the prerequisite course.

THE HONOURS COURSE

Students applying for admission to the Honours Course must have at least Grade B standing in ECONOMICS 4 (for Economics) or POLITICS 2 (for Politics) or the permission of the department.

For purposes of the Honours Course, the Department of Political and Economic Science may be regarded as a double department; a student may take a major in Economics and a minor in Politics, or a major in Politics and a minor in Economics.

Candidates planning to take the Honours Course in Economics or Politics are advised to offer Grade XIII subjects as follows: English, History, Latin or Mathematics (3 papers), a science, a language. Candidates who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

The programme for the degree is as follows:

(a) The Major

Economics

<i>First Year</i>	ECONOMICS	4— <i>Introduction to Economics</i>
<i>Second Year</i>	ECONOMICS	10— <i>Principles of Economics</i>
		12— <i>Money, Banking, and International Trade</i>
		13— <i>Introduction to Accounting and Finance</i>
<i>Third Year</i>	ECONOMICS	11— <i>Introduction to Statistics</i>
		15— <i>Modern Economic Theory</i>
		20— <i>Monetary Theory and Policy</i>

Politics & Economics

Fourth Year ECONOMICS 21—*Applied Economics*

24—*International Economics*

25—*Economic History of Canada and the United States*

ECONOMICS R1—*Economic History of Canada and the United States*

R2—*Contemporary Economic Interpretations*

R3—*Thesis*

In special cases this prescription may be varied with the permission of the department.

Politics

With History, Philosophy, or Mathematics as minor

POLITICS 2—*Introduction to Government and Politics*

ECONOMICS 4—*Introduction to Economics*

10—*Principles of Economics*

POLITICS 30—*Elements of Political Science*

31—*Canadian Government and Constitutional Law*

32—*Modern Political Thought*

36—*Politics of Democracy*

37—*Public Administration*

R1—*Government of Great Britain*

R2—*The British Commonwealth*

R3—*Thesis*

One of POLITICS 35—*International Politics*

39—*Municipal Government*

A major in Politics (with Economics as a minor) carries the same requirements except that an additional class in Politics and an additional class in History or Philosophy are to be substituted for the two classes in Economics.

(b) The Minor

PHILOSOPHY 1, 10, 27, and two advanced courses (see page 158); or HISTORY 3 or 5 or 6, 12, 13 or 19, and one other course numbered over 10, or SOCIOLOGY 1; or

MATHEMATICS 2, 10A, 11B, 13, and one of 19, 20; or

ECONOMICS 4, 10, 12, and two further courses (MATHEMATICS 3A may be offered as a half-course in Economics); or

POLITICS 2, 30, 31, and any two of 32, 35, 36, 37, 39.

(c) Compulsory general courses to complete the work for degree:

With Economics as major and Politics as minor or Politics as major and Economics as minor: ENGLISH 2.

With Economics as major and Philosophy, Mathematics or History as minor: ENGLISH 2 and POLITICS 2.

With Politics as major and Philosophy, Mathematics or History as minor: ENGLISH 2, a language or a science. If the candidate has Grade XIII standing in both a language and a science he may use the second general course as a free option.

(d) Two general examinations in the major subject.

It is desirable, though not required, that a student taking a major in Economics should include MATHEMATICS 2 (*Differential and Integral Calculus*) in his programme.

Public Administration

- (a) POLITICS 2—*Introduction to Government and Politics*
30—*Elements of Political Science*
31—*Canadian Government and Constitutional Law*
37—*Public Administration*
39—*Municipal Government*
R1—*The Government of Great Britain*
R2—*The British Commonwealth*
R3—*Thesis*

- ECONOMICS 4—*Introduction to Economics*
10—*Principles of Economics*
12—*Money, Banking, and International Trade*

Two other courses in Economics (MATHEMATICS 3A may be offered as a half-course in Economics)

One further course in Politics or Economics numbered over 10

Three of PHILOSOPHY 1—*Introduction to Philosophy*

PSYCHOLOGY 2—*An Elementary Survey of Mental Life*

HISTORY 3—*The North American Area*

SOCIOLOGY 1—*Introduction to Sociology*

(b) Compulsory general course: ENGLISH 2.

(c) Two general examinations in Politics.

Students taking Economics as one of the main subjects of the General Honours Course must take ECONOMICS 4, 10, 12, two other courses in Economics (MATHEMATICS 3A may be offered as a half-course in Economics), ECONOMICS 25, and ECONOMICS R1.

Students taking Politics as one of the main subjects of the General Honours Course must take POLITICS 2, 30, 31, 32, one of POLITICS 35, 36, 37, and 39, and POLITICS R1.

A minor in Economics normally consists of ECONOMICS 4, 10, 12,

Politics & Economics: Local Government

and two other courses in Economics (MATHEMATICS 3A may be offered as a half-course in Economics); a minor in Politics consists of POLITICS 2, 30, 31, and any two of POLITICS 32, 36, 37, and 39; but students preparing for admission to the course of study leading to the Interim High School Assistant's Certificate, Type A, in History at the Ontario College of Education make up the minor as follows: ECONOMICS 4, POLITICS 2, ECONOMICS 10, and two further courses in Economics or Politics.

INSTITUTE OF LOCAL GOVERNMENT

The Institute of Local Government is a branch of the Department of Political and Economic Science. Its purpose is to give sustained study and analysis to the problems of local government including the relations between the municipalities and the Provincial and Dominion governments. The results of research undertaken by it are made available in bulletins as occasion warrants.

The Institute also publishes from time to time bulletins containing data of interest to municipal governments and generally acts as a clearing house for information about the financial and administrative practices of municipal governments. Instruction in local government is offered and students wishing to prepare themselves for posts with municipalities will find association with the Institute a useful preparation.

COURSES OF INSTRUCTION

Economics

ECONOMICS 4. *Introduction to Economics.*

A study of the economic factors affecting the distribution of population and standards of living in such mainly agricultural economies as those of the Orient, of Europe before 1800 and of colonial North America; of the "industrial revolution" in Europe and the process of industrialization in the United States, Russia, Japan and "under-developed" countries of today; and of the effects of industry on agriculture and on standards of living.

Text-books: Jones & Darkenwald, *Economic Geography* (Macmillan, 1941); Heaton, *Economic History of Europe* (Harper, 1948).

Lectures—Tuesday, Thursday, Saturday at 9

Professor KNOX

ECONOMICS 10. *Principles of Economics.*

A general course in economic analysis in which an attempt is made to develop a working knowledge of economic principles and their application. The course should ordinarily be taken at the same time as ECONOMICS 12.

Prerequisite—Grade B in ECONOMICS 4 or in special cases the permission of the department. Text-books to be assigned.

Lectures—Monday, Wednesday, Friday at 2.30

Professors C. A. CURTIS and URQUHART

Politics & Economics: Local Government

ECONOMICS 11. *Introduction to Statistics.*

A general course in the descriptive and analytical uses of statistics in the fields of economics and commerce.

Prerequisite—MATHEMATICS 3A. Text-book: Croxton & Cowden, *Applied General Statistics* (Prentice-Hall, 1939). Supplementary readings will also be assigned.

Lectures—Monday, Wednesday, Friday at 10 Professor MCDUGALL

ECONOMICS 12. *Money, Banking, and International Trade.*

Prerequisite—Grade B in ECONOMICS 4 or in special cases the permission of the department. Assigned readings.

Lectures—Tuesday, Thursday, Saturday at 11 Professor SLATER

ECONOMICS 13. *Introduction to Accounting and Finance.*

An introductory study of accounting method with a related examination of some of the chief problems of corporation finance. For honours students whose major subject is Economics, this course has a weight of two and one-half hours per week.

Readings to be assigned.

Lectures—Monday, Wednesday, Friday at 11 Professor SMAILS

ECONOMICS 15. *Modern Economic Theory.*

A brief study of the development of modern schools of economic thought followed by discussion of the theory of equilibrium.

Prerequisite—ECONOMICS 10. Text-books: Gray, *The Development of Economic Doctrine* (Longmans); Cassel, *Theory of Social Economy* (Harcourt, Brace); Marshall, *Principles of Economics* (Macmillan); Stigler, *The Theory of Price* (Macmillan). References: Joan Robinson, *Theory of Imperfect Competition* (Macmillan); Chamberlin, *Theory of Monopolistic Competition* (Harvard University Press).

Lectures—Monday, Wednesday, Friday at 1.30 Professor URQUHART

ECONOMICS 20. *Monetary and Business Cycle Theory and Policy.*

A seminar course in monetary and business cycle theory and policy.

Prerequisite—ECONOMICS 12. References: Haberler, *Prosperity and Depression* (League of Nations, 1941); Keynes, *General Theory of Employment, Interest, and Money* (Macmillan, 1936); League of Nations, *Economic Stability in the Post-war World* (1945); Hansen, *Business Cycles and National Income* (Norton, 1951); Gordon, *Business Fluctuations* (Harper, 1952).

Lectures—Tuesday and Thursday at 2.30 Professor KNOX

ECONOMICS 21. *Applied Economics.*

A study of the application of economic theory to the problems of the distribution of national wealth and income as affected by monopoly, public finance, and other public policies.

Prerequisite—ECONOMICS 15. Text-book: Pigou, *Economics of Welfare* (Macmillan).

Lectures—Monday, Wednesday, Friday at 10 Professor C. A. CURTIS

Politics & Economics: Local Government

ECONOMICS 23. *Industrial Relations.*

This course will deal with the main economic and social forces which affect employer-employee relationships.

Prerequisite—ECONOMICS 10. Text-book: Lloyd G. Reynolds, *Labor Economics and Labor Relations* (Prentice-Hall). Assigned readings.

Lectures—Monday, Wednesday, Friday at 3.30 Professor C. H. CURTIS

ECONOMICS 24. *International Economics.*

A seminar course. Prerequisite—ECONOMICS 20. Assigned readings.

Lectures—Tuesday and Thursday at 2.30 Professor SLATER

ECONOMICS 25. *Economic History.*

A study of recent economic history with special reference to North America. A course one hour per week open only to honours students taking a major in Economics.

Assigned readings.

Lecture—Thursday at 1.30 Principal MACKINTOSH

ECONOMICS 26A. *Social Control of Business.*

A study of the process and structure by which economic activity is controlled on behalf of modern society.

Text-book—J. M. Clark, *Social Control of Business* (McGraw-Hill, N.Y.).

Lectures—Tuesday, Thursday, Saturday at 11 Professor HAND

ECONOMICS 28B. *Economics of Transportation.*

The chief interest in this course will be in the economics of railway transportation in Canada.

Text-books: R. A. C. Henry *et al.*, *Railway Freight Rates in Canada* (Ottawa, King's Printer, 1939); W. T. Jackman, *Economic Principles of Transportation* (Toronto, University of Toronto Press, 1935); D. P. Locklin, *Economics of Transportation* (Chicago, Business Publications Inc., 1935). Assigned readings.

Lectures—Monday, Wednesday, Friday at 9 Professor MCDUGALL

ECONOMICS R1. *Economic History of Canada and the United States.*

ECONOMICS R2. *Contemporary Economic Interpretations.*

ECONOMICS R3. *Thesis.*

Students registered in any of these reading courses should obtain the syllabus of readings and instructions from the department. Thesis topics are to be selected in consultation with members of the department.

For graduate courses see the *Calendar of Graduate Studies*.

Politics

POLITICS 2. *Introduction to Government and Politics.*

A comparative survey of the structure of present day democratic governments and the effect on them of the expansion of governmental functions in the twentieth century.

Text-book: Corry, *Democratic Government and Politics*, rev. edn., 1951 (University of Toronto Press).

Politics & Economics: Local Government

Lectures—Monday, Wednesday, Friday at 10

Professor CORRY

POLITICS 30. *Elements of Political Science.*

An analysis of the principal concepts of political science.

Prerequisite—POLITICS 2. Text-book: MacIver, *The Web of Government* (Macmillan). Assigned readings.

Lectures—Tuesday, Thursday, Saturday at 10

Professor HODGETTS

POLITICS 31. *Canadian Government and Constitutional Law.*

A critical study of the governmental institutions of Canada and in particular of the British North America Act and the federal system.

Prerequisite—POLITICS 30. Text-books: Dawson, *The Government of Canada* (University of Toronto Press); selected cases from Cameron, *The Canadian Constitution and the Judicial Committee*; selected readings from the *Report of the Commission on Dominion-Provincial Relations* and from Appendices thereto.

Lectures—Monday, Wednesday, Friday at 9

Professor CORRY

POLITICS 32. *Modern Political Thought.*

A survey of political thought since Machiavelli.

Prerequisite—POLITICS 30. Text-book: Sabine, *A History of Political Theory* (Henry Holt). Assigned readings.

Lectures—Tuesday, Thursday, Saturday at 9

Professor CORRY

POLITICS 35. *International Politics.*

An analytical study of the components of national power, methods in the pursuit of national interests, and of international order.

Prerequisite—POLITICS 30. Required readings: Strausz-Hupé & Possony, *International Relations* (McGraw-Hill); Morgenthau, *Politics among Nations* (Knopf). Other materials to be assigned.

Lectures—Monday 2.30-4.00, Thursday 10-11.30

Professor MEISEL

POLITICS 36. *Politics of Democracy.*

A survey of democratic processes with reference to the role of political parties and of group activity generally.

Prerequisite—POLITICS 30. Text-book: Herring, *The Politics of Democracy* (Rinehart). Assigned readings.

Lectures—Wednesday, Friday 2.30-4.00

Professor HODGETTS

POLITICS 37. *Public Administration.*

A comparative analysis of the structure, management and general control of the public services in Great Britain, United States and Canada.

Prerequisite—POLITICS 30. Text-book: F. M. Marx, *Elements of Public Administration* (Prentice-Hall). Assigned readings.

Lectures—Monday, Wednesday, Friday at 11

Professor HODGETTS

POLITICS 39. *Municipal Government.*

A survey of functions and administration of municipal government and its place in the structure of Canadian government.

Politics & Economics: Commerce

Prerequisite—POLITICS 30, except where special permission is secured from the instructor. Prescribed text: K. G. Crawford, *Local Government in Canada* (mimeographed). Assigned readings.

Lectures—Monday, Wednesday, Friday at 10

Professor CRAWFORD

Reading Courses

POLITICS R1. *The Government of Great Britain.*

Bagehot, *The English Constitution* (Oxford); F. A. Ogg, *English Government and Politics* (Macmillan); H. J. Laski, *Parliamentary Government in England* (Allen); Jennings, *Cabinet Government* (Cambridge); Jennings, *Parliament* (Cambridge); K. B. Smellie, *One Hundred Years of British Government* (Duckworth); L. S. Amery, *Thoughts on the Constitution* (Oxford); Wallace, *Readings in British Government* (University of Toronto Press).

POLITICS R2. *The British Commonwealth.*

Dawson, *Development of Dominion Status* (Oxford); Wheare, *The Statute of Westminster and Dominion Status* (Oxford); Mansergh, *The Commonwealth and the Nations* (Oxford); Jennings, *The British Commonwealth of Nations* (Hutchinson); Hodson, *Twentieth Century Empire* (Faber); Coatman, *The British Family of Nations* (Harrop).

POLITICS R3. *Thesis.*

Subject to be selected after consultation with members of the department.
For Graduate Courses see the *Calendar of Graduate Studies*.

Sociology

SOCIOLOGY 1. *Introduction to Sociology.*

An analysis of the principal concepts of sociology.

Prerequisite—ECONOMICS 4, POLITICS 2, or PSYCHOLOGY 2. Text-books: Ruth Benedict, *Patterns of Culture*; Everett C. Hughes, *French Canada in Transition*. Assigned readings.

Lectures—Monday, Wednesday, Friday at 11

Professor MEISEL

Commerce and Administration

(See also *Calendar of School of Commerce and Administration*)

COMMERCE 50. *Industrial Organization and Management.*

A study of the art of organizing and managing a modern industrial enterprise. In the latter part of the course the emphasis will be on problems of personnel administration in a manufacturing concern.

Text-book: Bethel, Atwater, Smith & Stackman, *Industrial Organization and Management* (McGraw-Hill).

Lectures—Monday, Wednesday, Friday at 2.30

Professor CAMERON

COMMERCE 52. *Introduction to Marketing.*

An introductory study of marketing problems.

Text-book: McNair & Hansen, *Problems in Marketing*.

Lectures—Tuesday, Thursday, Saturday at 10

Professor HAND

Politics & Economics: Commerce

COMMERCE 53. *Marketing.*

A study of the marketing problems and policies of individual business firms.
Text-book to be announced.

Lectures—Monday, Wednesday, Friday at 10

Professor HAND

COMMERCE 54. *Business Finance.*

A study of the financial problems of the business enterprise.

Text-book: Howard & Upton, *Introduction to Business Finance.*

Lectures—Monday, Wednesday, Friday at 9

Professor MACPHERSON

COMMERCE 55. *Investment Markets.*

An historical and statistical study of the markets for securities.

Hours to be arranged

Professor McDougall

COMMERCE 59. *Business Investigation and Research.*

An introduction to research methods. The student is required to select a topic and, under direction, to investigate and report upon it.

Hours to be arranged

Professor McDougall

COMMERCE 60. *Commercial Law.*

A study of the elements of commercial law, including the general principles of the law of contract and agency and the law relating to sale of goods, negotiable instruments, partnerships and companies.

General reading: Anson, *Principles of the English Law of Contract*, 19th edn., 1945 (Oxford); Falconbridge & Smith, *Manual of Canadian Business Law* (Pitman). Special topics: Caporn, *Cases on Contract* (Stevens and Sons); Falconbridge, *Law of Negotiable Instruments in Canada* (Ryerson); Jenks, *Book of English Law* (John Murray); *The [Dominion] Companies Act, 1934*, and other statutes.

Lectures—Tuesday, Thursday, Saturday at 9

Professor SMYTH

COMMERCE 63. *Elements of Accounting.*

An introductory study of the principles and practice of accounting. This course is for students who are proceeding to the degree of Bachelor of Commerce. Arts candidates who are interested in accounting may register in ECONOMICS 13.

Text-books: Smails, *Accounting Principles and Practice* (Ryerson); Smyth, *An Introduction to Accounting Method* (Published by the author).

Lectures—Monday, Wednesday, Friday at 11 (Section A); at 2.30 (Section B)

Professors MACPHERSON and SMYTH

COMMERCE 64. *Intermediate Accounting.*

A course in which the studies of COMMERCE 63 are carried to a more advanced stage and some further problems are considered.

Reading: Smails, *Accounting Principles and Practice*, 3rd edn. (Ryerson); Paton, *Advanced Accounting* (Macmillan); Finney & Miller, *Principles of Accounting*, Intermediate, 4th edn. (Prentice-Hall); Hatfield, *Accounting* (Appleton).

Lectures—Tuesday, Thursday, Saturday at 10

Professors SMAILS and MACPHERSON

Commerce, Psychology

COMMERCE 66A. *Cost Accounting*.

This course presents the principles and methods of cost accounting.

Lectures—Tuesday, Thursday, Saturday at 9

Professor SMAILS

COMMERCE 67B. *Auditing and Internal Check*.

A study of systems of internal check, the functions of internal and external auditors, and audit procedure generally.

Text-books: Smalls, *Auditing*, 3rd edn. (Pitman); *Crediting Standards and Audits by Certified Public Accountants* (American Institute of Accountants).

Lectures—Tuesday, Thursday, Saturday at 9

Professor SMAILS

COMMERCE 68. *Contemporary Accounting Theory and Practice*.

A study of modern accounting thought and procedures in the light of their historical development.

Students in this course are required to subscribe to *The Accounting Review*.

Lectures—Monday, Wednesday, Friday at 9

Professor SMYTH

Department of Psychology

J. M. BLACKBURN, B.Sc., Ph.D., *Professor*

C. H. McCUAIG, M.D., C.M., *Professor of Psychiatry*

A. H. SMITH, Ph.D., M.A., *Associate Professor*

ISABEL M. LAIRD, M.A., B.Ed., *Assistant Professor*

ELSPETH H. BAUGH, A.M., *Instructor*

BARBARA PETERS, B.A., *Research Assistant* (1952-3)

PSYCHOLOGY 2 is prerequisite to all other courses in Psychology.

Students choosing Psychology as one of the subjects of concentration on the General Course take PSYCHOLOGY 2 (*An Elementary Survey of Mental Life*), and two of PSYCHOLOGY 3 (*Educational Psychology*), PSYCHOLOGY 4 (*Fields of Psychology*), PSYCHOLOGY 6 (*Social Psychology*) and PSYCHOLOGY 8 (*Child Psychology*). Those wishing to make a group of five for the General Course may take PSYCHOLOGY 2, 4 and three courses selected from PSYCHOLOGY 3, 6, 8 and SOCIOLOGY 1.

For information about scholarships in Psychology, see page 53.

THE HONOURS COURSE IN PSYCHOLOGY

Candidates planning to take the Honours Course in Psychology must take Grade XIII Mathematics (3 papers) or MATHEMATICS 1. They are advised to offer other Grade XIII subjects as follows: English, a language, a science (Biology is recommended), and a fifth subject, which may be a second language, a second science (Physics is recommended), or His-

tory. Students who do not offer the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

The programme for the degree is as follows:

(a) The Major

First year

PHILOSOPHY 1—*Introduction to Philosophy*

PSYCHOLOGY 2—*An Elementary Survey of Mental Life*

Second year

MATHEMATICS 3A and 3B—*Statistics*

PSYCHOLOGY 15—*Experimental Psychology*

Third year

PSYCHOLOGY 26—*Theory and Practice of Mental Tests*

Third or Fourth year

PSYCHOLOGY 31—*Systematic Psychology*

Fourth year

PSYCHOLOGY 30—*Experimental Problems*

two of PSYCHOLOGY 23—*Social Psychology (offered in alternate years)*

24—*Dynamics of Personality*

35—*Abnormal and Clinical Psychology*

and PSYCHOLOGY R1—*Applied Psychology*

R2—*Dynamic Psychology*

R3—*Social Psychology*

(b) The Minor

BIOLOGY 16, 45, PHYSIOLOGY 10, and one further course in Biology; or ECONOMICS 4, 10, 12, and two further courses in Economics; or POLITICS 2, 30, 31, and two courses in Politics selected from 32, 36, 37, 39; or

MATHEMATICS 2, 10A, 11B, 13 and one of MATHEMATICS 19, 20.

(c) Compulsory general course to complete the work for the degree: ENGLISH 2.

(d) Two general examinations in Psychology.

A minor in Psychology is ordinarily PSYCHOLOGY 2, MATHEMATICS 3A and 3B, PSYCHOLOGY 15, 31, and one other lecture course.

COURSES OF INSTRUCTION

PSYCHOLOGY 2. *An Elementary Survey of Mental Life.*

Text-book: R. Stagner & T. F. Karwoski, *Psychology* (McGraw-Hill, 1952).
Supplementary readings: H. E. Garrett, *Great Experiments in Psychology* (Appleton-Century, 3rd. edn., 1951); W. Dennis, *Readings in General Psychology*

Psychology

(Prentice-Hall, 1949); L. W. Crafts, T. C. Robinson, E. E. Schneirla, & R. W. Gilbert, *Recent Experiments in Psychology* (McGraw-Hill, rev. edn., 1950); S. L. Hartley, H. G. Birch, & R. E. Hartley, *Outside Readings in Psychology* (Crowell, 1950); W. L. Valentine & D. D. Wickens, *Experimental Foundations of General Psychology* (Rinehart, rev. edn., 1949).

Lectures—Monday, Wednesday, Friday at 11

Professor BLACKBURN

PSYCHOLOGY 3. *Educational Psychology.*

Given extramurally.

Professor LAIRD

PSYCHOLOGY 4. *Fields of Psychology.*

A survey of the application of psychology to different fields, such as child psychology, industrial psychology, clinical psychology, physiological psychology, social psychology, educational psychology, personnel and vocational psychology.

Text-book: J. P. Guilford, *Fields of Psychology* (Clarke, Irwin, rev. edn., 1950). Supplementary readings: J. L. Gray, *Psychology in Human Affairs* (McGraw-Hill, 1946); R. H. Seashore, *Fields of Psychology* (Holt, 1942); F. K. Berrien, *Practical Psychology* (Macmillan, 1949).

Lectures—Monday, Wednesday, Friday at 9

Professor SMITH

PSYCHOLOGY 6. *An Introduction to Social Psychology.*

Not offered intramurally in 1953-4.

PSYCHOLOGY 8. *Principles of Child Development.*

A discussion of methods of child study, of the process of development and of the factors which influence development. A minimum of twenty-five hours of field work will be required.

Text-book: To be announced.

Lectures—Tuesday and Thursday at 10

Professor LAIRD

PSYCHOLOGY 15. *Experimental Psychology.*

An introduction to the problems and methods of experimental psychology. Students will perform experiments in human sensation, perception, motivation, perceptual-motor and verbal learning, and thinking. Recent research will be discussed. The emphasis in this course will be on experimental design.

Text-book: B. J. Underwood, *Experimental Psychology* (Appleton-Century-Crofts, 1949). Assigned supplementary readings.

Lectures—Tuesday and Thursday at 11

Laboratory—Thursday, 2-5

Professor SMITH

PSYCHOLOGY 23. *Social Psychology*

Theories, problems and methods of social psychology: human inter-action and group theory; the relation between the self and the social group; social norms and social rôles; the effect of group conditions on judgments and attitudes; group conflict and group solidarity.

Text-book: S. E. Asch, *Social Psychology* (Prentice-Hall, 1952). Also assigned readings.

Hours to be arranged

Professor BLACKBURN

PSYCHOLOGY 24. *Dynamics of Personality.*

A study of personality development from youth to old age, with special reference to theories of personality, methods of measuring personality, and factors influencing personality adjustment and maladjustment.

Assigned readings.

Lectures—Monday, Wednesday, Friday at 11

Professor LAIRD

PSYCHOLOGY 26. *Theory and Practice of Mental Tests.*

An introduction to the theory and practice of mental testing. Particular attention is given to supervised training in the administration of the Revised Stanford-Binet and Wechsler-Bellevue tests. A briefer consideration is given to the following types of test: interest inventories, aptitude tests, attainment tests, and personality tests—including some projective techniques.

Text-books: F. L. Goodenough, *Mental Testing* (Rinehart, 1949); L. M. Terman & M. A. Merrill, *Measuring Intelligence* (Houghton-Mifflin, 1937); D. Wechsler, *The Measurement of Adult Intelligence* (Williams and Wilkins, 1944). Supplementary readings: T. W. Richards, *Modern Clinical Psychology* (McGraw-Hill, 1946); D. Super, *Appraising Vocational Fitness* (Harper, 1950).

Lectures—Tuesday and Thursday at 9

Professor LAIRD

PSYCHOLOGY 30. *Experimental Problems.*

A seminar in research problems. Recent research will be discussed and each student will develop and carry out an original investigation.

Hours by arrangement

Professor SMITH

PSYCHOLOGY 31. *Systematic Psychology.*

Not offered in 1953-4.

PSYCHOLOGY 35. *Abnormal and Clinical Psychology.*

Lectures and demonstrations having a special bearing on the psychoses and psychoneuroses. The purpose is to give the student a first hand acquaintance with clinical material and problems. The course is given to specially qualified students and by arrangement with the instructor and the department.

Prerequisite—PSYCHOLOGY 24. Texts and hours by arrangement.

Dr McCUAIG and Mrs BAUGH

Reading Courses

PSYCHOLOGY R1. *Applied Psychology.*

M. S. Viteles, *Industrial Psychology* (Norton); J. Tiffin, *Industrial Psychology* (Prentice-Hall); R. L. Thorndike, *Research Problems and Techniques in Personnel Psychology* (Wiley); A. Chapanis, W. R. Garner & C. T. Morgan, *Applied Experimental Psychology* (Wiley); J. M. Stephens, *Educational Psychology* (Holt); F. J. Roethlisberger & W. J. Dickson, *Management and the Worker* (Harvard University Press); H. Cantril, et al., *Gauging Public Opinion* (Princeton University Press).

PSYCHOLOGY R2. *Dynamic Psychology.*

G. W. Allport, *Personality* (Holt); J. Dollard & N. E. Miller, *Personality and Psychotherapy* (McGraw-Hill); A. Kardiner, *The Individual and His Society* (Columbia University Press); D. Kluckhohn & H. A. Murray, *Personality in Nature, Society and Culture* (Knopf).

Psychology, Religion

PSYCHOLOGY R3. *Social Psychology*.

D. Krech & R. S. Crutchfield, *Theory and Problems of Social Psychology* (McGraw-Hill); J. C. Flugel, *Man, Morals and Society* (Duckworth); N. E. Miller & J. Dollard, *Social Learning and Imitation* (Yale University Press); S. S. Sargeant, *Social Psychology* (Ronald).

GRADUATE COURSES

For information about graduate courses in Psychology, see the *Calendar of Graduate Studies*.

Religion

Rev. S. MACLEAN GILMOUR, B.D., Ph.D., D.D., *Professor*

COURSES OF INSTRUCTION

RELIGION 1. *Old Testament Literature and History*.

The beginnings of Hebrew literature; ballads; war-songs; folk lore and saga; historical prose; the literary sources of the Hexateuch and historical books; the origin and development of prophecy; Hebrew poetry and wisdom literature; the Apocryphal and Apocalyptic writings. Hebrew political history down to the Maccabean period, and the relation of the Hebrew people to the surrounding nations of antiquity. *Not offered in 1953-4.*

Text-books: Bewer, *Literature of the Old Testament* (Columbia University Press); Goodspeed, *The Story of the Bible* (University of Chicago Press). Other reading to be assigned.

RELIGION 2. *New Testament Literature and History*.

Origin of New Testament writings: Codices and Manuscripts; the Latin Bible; the English versions; the Gospels studied as the literary sources of the teaching of Jesus; the Synoptic and Johannine Problems; the life and letters of St. Paul; the Christian Apocalypses; the social and religious conditions in the Roman Empire and the spread of Christianity up to the end of the first century.

Text-books: *The Revised Standard Version of the New Testament*; Goodspeed, *Paul* (Winston, Philadelphia); Scott, *The Literature of the New Testament* (Columbia University Press). Other reading to be assigned.

Lectures—Tuesday, Thursday, Friday at 1.30

Professor GILMOUR

RELIGION 3. *The Chief Non-Christian Religions of the World*.

The history, principles, practices, and sacred literature of Hinduism, Buddhism, Confucianism, Shinto, Judaism, Zoroastrianism, and Islam; the strength and weakness of the various faiths; their present vitality; areas of possible or actual conflict and co-operation.

Text-books: Noss, *Man's Religions* (Macmillan); Ballou, *World Bible* (Viking Press).

Lectures—Tuesday, Thursday, Friday at 2.30

Professor GILMOUR

RELIGION 4. *Christianity Within Western Civilization*.

The impact of Christianity on the political, economic, social, intellectual and religious life of the Graeco-Roman world; the effect of Christianity on social

relations, political theory, education, scholarship and literature during the mediaeval period; the social effects of the Protestant and Catholic Reformations; Christianity and the expansion of European peoples after the discovery of the New World; Christianity and its environment in modern times; the strength and weakness of present-day Christianity; the challenge to Christianity of new paganism.

Text-books: Nichols, *The Growth of the Christian Church* (Westminster); Latourette, *Anno Domini* (Harper).

Not offered in 1953-4.

Russian Language and Literature

VALENTINA N. KROTKOV, M.A., *Instructor*

COURSE OF INSTRUCTION

RUSSIAN A. *Elementary Russian.*

The object of this course is to give students the common vocabulary, the fundamental grammatical structure of the Russian language and a brief introduction to Russian literature. As this is an introductory course, no previous knowledge of the language is required.

Text-book: A. Semeonoff, *A New Russian Grammar*.

Hours to be arranged

Mrs KROTKOV

Spanish Language and Literature

H. W. HILBORN, M.A., Ph.D., *Professor*

A. M. FOX, M.A., *Assistant Professor*

J. K. McDONALD, M.A., *Lecturer*

Spanish A may be counted towards the General degree, or as an optional course on Honours Courses in subjects other than Spanish. It may not be counted towards a major or minor in Spanish. Students who enter the University without matriculation in Spanish and who wish to specialize in this subject may complete their programme of work in the usual time by taking SPANISH A during their first winter session and SPANISH 1 in the following summer.

SPANISH A (*Introductory Spanish*) is prerequisite to SPANISH 1 (*Intermediate Spanish*), and SPANISH 1 is prerequisite to all other courses. Students making Spanish one of the three subjects of concentration on the General Course take SPANISH A, 1, 2 (*Modern Authors; Language*) or SPANISH 6 (*Don Quijote and Representative Modern Authors; Commercial Spanish*); or if they have entered with Grade XII Spanish, SPANISH 1, 2, 6 or 10 (*Modern Literature; Composition*); or if they have Grade XIII Spanish, SPANISH 2, 6, and 10.

Spanish

THE HONOURS COURSE IN SPANISH

Candidates planning to take the Honours Course in Spanish are advised to offer Grade XIII subjects as follows: English, Latin, French, Spanish, a science. Candidates who are not able to take the normal Grade XIII programme but who have full standing for admission to the Faculty of Arts may arrange their degree Course so as to include the subjects that they lack.

The programme for the degree is as follows:

(a) The Major

SPANISH 2—*Modern Authors; Language*

10—*Modern Literature; Composition*

22—*Drama of the Golden Age; Advanced Composition; Civilization*

24—*Cervantes; Advanced Composition; Civilization*

29—*El Teatro Moderno y la Novela Realista*

30—*Desarrollo de La Lengua y Literatura Castellanas Desde Los Orígenes Hasta la Época Moderna; Introducción a la Literatura Hispanoamericana*

With two courses to be selected from LATIN 2 (*Translation and Prose Composition*), FRENCH 2 (*Second Year French*), an Honours course in English, HISTORY 12 (*Mediaeval Europe, 400-1453*) or HISTORY 24 (*The Renaissance and the Reformation*), ITALIAN 1 (*Intermediate Italian*).

SPANISH R1—*Civilización Española*

R2—*Autores Clásicos*

R3—*Autores Españoles e Hispanoamericanos Modernos*

ITALIAN 1, if not selected previously, may be substituted for one of the reading courses.

(b) The Minor

FRENCH 2, 10, 11, 14; or

GERMAN 2, 10, and two honours courses in German; or

ENGLISH 2 or 5, 10, and two chosen from 15, 19, 20, 22 or

LATIN 2, 12 or 13, 20, 30.

(c) Compulsory general courses to complete the work for degree: With French or German or Latin as minor: ENGLISH 2, PHILOSOPHY 1 or 5, a science. If the candidate has Grade XIII standing in a science, he may take a free option as the third general course. With English as minor: PHILOSOPHY 1, a science, a free option. If the candidate has Grade XIII standing in a science, he may take a free option as the second general course.

(d) Two general examinations in Spanish.

For information about the course of study leading to the High School Teaching Certificate in Spanish and English or Spanish and French, see pages 89, 90. For information about scholarships in Spanish, see pages 52, 53.

A minor in Spanish normally consists of SPANISH 2, 10, and two further honours courses.

COURSES OF INSTRUCTION

SPANISH A. *Introductory Spanish.*

For students with little or no previous knowledge of Spanish. The course comprises a study of the essentials of Spanish grammar with exercises in translation into Spanish, pronunciation, and extensive reading of graded Spanish texts designed to lead the student from simple Spanish to prose of moderate difficulty and selected to illustrate various aspects of Spanish-American civilization. Oral work in connection with the texts.

Text-books: Babcock & Treviño, *Introduction to Spanish* (Houghton-Mifflin); Turk, *Así se aprende el español* (Heath); Barlow & Steel, *Noche oscura en Lima* (Crofts).

Lectures—Monday, Wednesday, Friday at 9
Monday, Wednesday, Friday at 10
Monday, Wednesday, Friday at 11
Tuesday, Thursday, Saturday at 9

Professor FOX and Mr McDONALD

SPANISH 1. *Intermediate Spanish.*

A more detailed study of Spanish grammar, written exercises and composition, the reading of a number of texts and oral work thereon. The reading programme is designed to lead the student from easy texts, dealing with topics of Spanish and Spanish-American history and culture, through short stories and poems to a standard modern drama.

Prerequisite—SPANISH A or Grade XII Spanish. Text-books: Walsh, *Repaso* (Norton); Huebener & Morales, *Grandes latinoamericanos* (Holt); Cano, *La vida de un pícaro* (Macmillan); Kasten & Neale-Silva, *Lecturas modernas* (Harper); Casona, *La Sirena varada* (Appleton-Century-Crofts).

Lectures—Monday, Wednesday, Friday at 9

Monday, Wednesday, Friday at 1.30 Professors HILBORN and FOX

SPANISH 2. *Modern Authors. Language: Survey of Grammar, Composition, Conversation.*

Prerequisite—SPANISH 1 or Grade XIII Spanish. Text-books: Bodsworth & James, *Cuentos modernos* (Black); Palacio Valdés, *A cara o cruz* (Macmillan); Martínez Sierra, *Canción de cuna* (Heath); Martínez Sierra, *Sueño de una noche de agosto* (Norton); Barton & Cúneo, *Spanish Review* (Crofts)—grammar study and passages for composition; Julio Camba, *La rana viajera* (Heath). Conversational guide reading also assigned. Extramural students are to obtain: García-Prada, *Entendámonos* (Houghton-Mifflin).

Extramural students must satisfy the oral requirements. Unless these have been

Spanish

met by previous work done at the University, it will be necessary either to complete the course at the Summer School or to take a special oral examination.

Lectures—Tuesday, Thursday, Saturday at 9, and additional practice hours.

Professor Fox and Mr McDONALD

SPANISH 6. *Don Quijote. Representative Modern Authors. Commercial Spanish.*

The study of commercial Spanish, with exercises in Spanish commercial correspondence, constitutes one third of the course.

Prerequisite—SPANISH 1 or Grade XIII Spanish. Text-books: Cervantes, *Don Quijote de la Mancha*, ed. J. Cano (Macmillan); Pattison, *Representative Spanish Authors*, Vol. II (Oxford University Press); Arjona, *Viaje de negocios* (American Book Company). Readings in *Don Quijote* in addition to those found in Cano's selections will be assigned.

Lectures—Tuesday, Thursday, Saturday at 10

Additional time for conversation may be required.

Mr McDONALD

Pass students may be admitted to courses numbered 10 and upward if their previous work in Spanish is of sufficiently high calibre. Before enrolling in such courses they should obtain the consent of the department.

SPANISH 10. *Modern Literature. Composition.*

Text-books: Mitchell, *Intermediate Spanish Composition* (Longmans, Green); Pérez Galdós, *Doña Perfecta* (Ginn); Valera, *Pepita Jiménez* (Heath); García Gutiérrez, *El trovador* (Heath); Benavente, *Tres comedias* (Heath); Quinteros, *Doña Clarines, Mañana de sol* (Heath); Marquina, *En Flandes se ha puesto el sol* (Heath).

Lectures—Monday, Wednesday, Friday at 1.30

Professor HILBORN

SPANISH 22. *Drama of the Golden Age. Advanced Composition. Civilization.*

A study of representative comedias of the *Siglo de Oro*. Exercises in advanced prose composition. Civilization from the seventeenth century.

Text-book: Alpern & Martel, *Diez comedias del Siglo de Oro* (Harper). This course will require considerable use of the library.

(Not offered in 1953-4)

SPANISH 24. *Cervantes and his Times. Advanced Composition. Civilization.*

Studies relating to the *Quijote*. Exercises in advanced prose composition. Civilization to the seventeenth century.

Text-book: Miguel de Cervantes Saavedra, *Don Quijote de la Mancha* (in *Colección Austral*, Espasa-Calpe). This course will require considerable use of the library.

Lectures—Monday, Wednesday, Friday at 10

Professor HILBORN and Mr McDONALD

SPANISH 29. *El Teatro Moderno y la Novela Realista.*

Text-books: *Nineteenth Century Spanish Plays*, ed. L. E. Brett (Appleton-Century); Valera, *Pepita Jiménez* (Heath); Pérez Galdós, *Doña Perfecta* (Ginn). For reference: César Barja, *Libros y autores modernos*, rev. ed. (Campbell's Book Co., Los Angeles).

Not offered in 1953-4.

Professor Fox

SPANISH 30. *Desarrollo de la Lengua y Literatura Castellanas desde los Orígenes Hasta la Epoca Moderna. Introducción a la Literatura Hispanoamericana*

Text-books: Romera-Navarro, *Antología de la literatura española* (Heath); Jorge Isaacs, *María* (Ginn); Ricardo Güiraldes, *Don Segundo Sombra* (Holt); Rómulo Gallegos, *Doña Bárbara* (Crofts); Ciro Alegría, *El mundo es ancho y ajeno* (Crofts); Gregorio López y Fuentes, *Tierra* (Ginn).

Hours to be arranged

Professor Fox and Mr McDONALD

Reading Courses

SPANISH R1. *Civilización Española.*

Designed to acquaint the student with the distinctive features of Spanish civilization and to enable him to make just comparisons between this civilization and others. This course is complementary to the civilization studies of SPANISH 22 and 24.

Rafael Altamira, *Manual de historia de España*, or W. C. Atkinson, *Spain, A Brief History*; N. B. Adams, *España*—sections on history and the arts; Paul Jamot, *La Peinture en Espagne*; Havelock Ellis, *The Soul of Spain*; Tamayo y Baus, *La locura de amor*; Santa Teresa, *Libro de su vida* (*Las misericordias de Dios*); George Borrow, *The Bible in Spain*; Unamuno, *Perplexities and Paradoxes*; Baroja, *Ualacáin el aventurero*; Elliott Paul, *The Life and Death of a Spanish Town*; Madariaga, *Englishmen, Frenchmen, Spaniards*. References and a reading plan will be provided by the instructor in charge. **Professor Fox**

SPANISH R2. *Autores Clásicos.*

Designed to acquaint the student with the various literary trends which led to Spain's Golden Age, and to give him a clear concept of that age as reflected in its literature. This course is complementary to the literary studies of SPANISH 22 and 24. The Instructor will give occasional guidance to assist in the analysis of literary trends and in the criticism of certain individual works.

Romancero general (*Biblioteca de autores españoles*, Vol. 16, Nos. 918-950); Garcilaso de la Vega, *Works* (ed. Keniston); Góngora, *Poesías* (ed. Baker, pp. 1-24), *Soledad Primera* (same edition, pp. 46-80); Quevedo, *La vida del Buscón*; Lope de Vega, *Amar sin saber a quién*, *La moza de cántaro*; Tirso de Molina, *El vergonzoso en palacio*; Alarcón, *Las paredes oyen*; Calderón, *El Mágico prodigioso*, *El alcalde de Zalamea*. **Professor HILBORN**

SPANISH R3. *Autores Españoles e Hispanoamericanos Modernos.*

Designed to acquaint the student with the more important achievements of Spanish literature having a background outside of Spain itself, including the literature of Spanish America. This course is complementary to parts of SPANISH 10 and 30. The instructor will give occasional suggestions to assist the student in his approach to this body of literature. Several histories of literature should be consulted for reference.

Blasco Ibáñez, *Los cuatro jinetes del Apocalipsis*; Pío Baroja, *Paradox, Rey*; Azuela, *Los de abajo*; López y Fuentes, *El indio*; Altarmirano, *El zarco*; Hernández, *Martín Fierro*; Gálvez, *La pampa y su pasión*; Wast, *La casa de los*

Spanish: Italian

cuervos; Florencio Sánchez, *La gringa*; Barrios, *El hermano asno*.

Professor HILBORN

GRADUATE COURSES

For information about graduate courses in Spanish, see the *Calendar of Graduate Studies*.

ITALIAN LANGUAGE AND LITERATURE

The courses in Italian are offered only if they are asked for by five or more students. They are recommended especially for students taking the Honours Course in Spanish or French or the course of study leading to the Interim High School Assistant's Certificate, Type A, in Spanish and French. ITALIAN 1 may be substituted for one of the reading courses or one of the courses given outside the department of Spanish on the major in Spanish.

COURSES OF INSTRUCTION

ITALIAN A. *Introductory Italian*.

The general aims of the course correspond to those of SPANISH A, but the amount of work covered will be considerably greater.

Text-books: Russo, *Present Day Italian* (Heath); Goggio, *A New Italian Reader for Beginners* (Heath); Masella, *Le Avventure di Giovanni Passaguai* (Holt); Bergin, *Modern Italian Short Stories* (Heath).

Hours to be arranged.

Professor HILBORN

ITALIAN 1. *Intermediate Italian and Introduction to Literature*.

A continuation of grammar and oral work, along with a study of some important representative works in Italian literature.

Prerequisite—ITALIAN A or Grade XIII Italian. Text-books: Russo, *Present Day Italian* (Heath); Marraro, *Contemporary Italian Short Stories* (Holt); Pirandello, *Così è se vi pare* (Heath); Goldoni, *Il vero amico* (Heath); Manzoni, *I promessi sposi*, ed. Geddes & Wilkins (Heath); Dante, *La vita nuova*, ed. McKenzie (Heath).

Hours to be arranged

Professor HILBORN

INDEX

Absence from class, certificate for, 28
 Academic year, viii-ix
 Administration, The, 3-8; *see also* Government and Administration
 Admission, requirements for, 31-5; by matriculation, 31-3; by equivalent examination, 34-5; by special regulation, 35; of ex-service men and women, 34; to advanced standing, 35; to Honours, 86; to Combined Course in Arts and Physical and Health Education, 92-3
 Advanced standing, *see* Admission
 Allowance of credit on courses taken in another University, 35; fee for, 38
 Alma Mater Society, 29; lecture, 29
 Ancient History, courses of instruction in, 117; scholarships in, 49
 Applied Science, Interim High School Assistant's Certificate, Type A, for Graduates in, 91-2
 Art, courses of instruction in, 97
 Arts, Bachelor of, *see* Bachelor of Arts; and Physical and Health Education, Combined Course in, 92-4; and Theology, Combined Course in, 94; Master of, *see* Master of Arts
 Astronomy, course of instruction in, 154
 Athletics, facilities for, 22-3
 Bachelor of Arts, 83-90; Honours degree, requirements for, 86; General degree, requirements for, 83-4; *see also* Arts and Physical and Health Education, Arts and Theology, Combined Courses in; *see also* Degrees
 Bacteriology, courses of instruction in, 98
 Ban Righ Hall, 26
 Berry House, 25-6
 Biochemistry, courses of instruction in, 100-1
 Biology, courses of instruction in, 104-7; Honours Course in, 102-4; field work in, 22; scholarships in, 57-8
 Board and room, cost of, 27; cost of in cooperative residence, 25-6
 Board of Trustees, xvi, 5-6
 Boucher House, 26
 Bursaries, B'nai B'rith, Kingston, 61; Do-

minion-Provincial Student-Aid, Type B, 63; George Taylor and Lilian Coleman Taylor, 64; Robert Bruce, 61; University Women's Club of Kingston, 62; *see also* Scholarships
 Calendar, x-xi
 Canadian Officers' Training Corps, 29-30
 Certificate, for absence from class, 28; of standing equivalent to Ontario Grade XIII, 35; of vaccination, 28; *see also* Teachers' Certificates
 Chemistry, courses of instruction in, 109-13; Honours Course in, 108-9; fellowships in, 67; scholarships in, 58-9
 Class of degree, in honours courses, 88
 Classical Literature, courses of instruction in, 113; scholarship in, 49
 Classics, courses of instruction in, 113-20; scholarships in, 48-9; Interim High School Assistant's Certificate, Type A, in, 89, 115; *see also* Ancient History, Classical Literature, Greek, Latin
 Collins House, 25-6
 Commerce and Administration, courses of instruction in, 176-8; fellowships in, 67-8; *see also* Political and Economic Science
 Commercial Specialist's Certificate, 91
 Co-operative residence, for men (Berry House, Collins House), 25-6; for women (Boucher House), 26
 Correspondence, courses by, *see* Extramural work
 Council of Legal Education of Great Britain, 25
 Council, University, *see* University Council
 Courses, Graduate, 95-6; half-courses, 82; number of, in a year, 78; numbering of, 82; credit for, taken at another university, *see* Allowance; *see also* Bachelor of Arts, Extramural work, General B.A., Honours B.A., Summer School
 Degrees, by examination, 24; *in absentia*, 46; *see also* Bachelor of Arts, Doctor

Index

- of Philosophy, Master of Arts; in course, 24; honorary, 24; hoods for, 24-5
- Diplomas granted by the University, 24
- Doctor of Philosophy, degree of, 96
- Douglas Library, *see* Library
- Drama, courses of instruction in, 120; Andrina McCulloch Scholarship for Drama, 60
- Economics, courses of instruction in, 172-4; *see also* Political and Economic Science
- Emeritus Professors, 9
- Employment service, 30
- English A, 83, 123
- English Language and Literature, courses of instruction in, 123-5, Honours Course in, 121-2; Interim High School Assistant's Certificate, Type A, in English, English and Latin, English and French, English and German, English and Spanish, 89, 90; scholarships in, 49-51
- Entrance, *see* Admission
- Equipment and special features, 18-23
- Examinations, extramural, 40-2; final, 80; Graduate Record, 96; mid-term, 79; mid-year, 80; Reading Course, 80; special, 81; supplemental, 41, 80-1
- Examinations, admission to, 80; application for (extramural), 41, 80; fees for, 46-7; re-reading of, 81; determination of standing in, 78, 81; grades in, 81
- Exchange scholarships, *see* Scholarships
- Expenses, cost-of-living for students, 27
- Ex-servicemen, admission of, 34, 83
- Extramural work, courses of instruction offered in, in each year, 42-3; admission to, 36-8; examinations in, 40-2; fees for, 38-9, 47; library facilities for, 40; registration for, 37-8; residence requirements for, 39; scholarship in English 2, 49-50; supplemental examinations in, 41; textbooks for 40
- Faculty, the, 9-17
- Faculty boards, xvii-xviii
- Failures and low grades, 79-81; in extramural examinations, 40-2; involving loss of year, 79; involving withdrawal from the University, 79
- Fees, examination, 46-7; extramural and Summer School, 38-9, 47; graduate, 46; graduation, 46; intramural, 45; laboratory, 46; *pro tanto* allowance, 46, 47; year, 46; when payable, 45; for courses in Physical and Health Education, 45; in Combined Course in Arts and Theology, 94
- Fellowships, Resident, 66; Travelling, 65; Departmental, 66-70
- Fellowships in Chemistry, 67; in Commerce, 67-8; in Geology, 68-9; in History, 69; in Industrial Relations, 69-70; in Philosophy, 70; in Physics, 67, 68; *see also* Scholarships
- Field work, facilities for, in Geological Sciences and in Botany and Zoology, 22
- Fraternities, 29
- French Language and Literature, courses of instruction in, 127-9; Interim High School Assistant's Certificate, Type A, in French and Latin, French and English, French and German, French and Spanish, 89-90; Honours Course in, 125-7; oral work in, 127; scholarships in, 51; prize in (Summer School), 77
- General B.A., requirements for, 83-5; granted for work in an Honours Course, 88
- General Honours Course, *see* Honours B.A.
- Geological Sciences, courses of instruction in, 132-7; fellowships in, 68-9; field work in, 22; Honours Course in, 130-2; scholarships in, 59-60
- German Language and Literature, courses of instruction in, 139-42; Honours Course in, 138-9; Interim High School Assistant's Certificate, Type A, in German and English, German and French, 89-90; scholarships in, 51-2
- Government and Administration, xvi-xviii
- Grade XIII examinations, 31

- Grade XIII, certificates equivalent to Ontario, 34; recommended programmes of study in, 32-3
- Grades in examination standing, 81
- Graduate work, application for, 95-6; fees for, 46; requirement for, 95-6; thesis requirement, 95-6
- Greek Language and Literature, courses of instruction in, 115-6; Honours Course in, 114-5, scholarships in, 49; *see also* Ancient History, Classics, Latin
- Gymnasium, description of, 22-3
- Gymnasium costume for women students, 26
- Health insurance, 27-8
- Hebrew Language and Literature, courses of instruction in, 142; scholarships in, 52
- High School Teacher's Certificates, 88; Interim High School Assistant's Certificate, Type A, 88, for graduates in Applied Science, 91; in Physical and Health Education, 92; *see also* Teachers' Certificates
- History, courses of instruction in, 146-9; fellowships in, 69; Honours Course in, 143-5; Interim High School Assistant's Certificate, Type A, in, 90, 145; scholarships in, 53
- History of the University, xiv-xv
- Honours B.A. courses, admission to, 86; classes in, 88; final year examinations in, 87-8; General, 87; in languages leading to Interim High School Assistant's Certificate, Type A, 89-90; length of, 87; General degree on, 88; specialized, 86
- Hoods, *see* Degrees
- Hospital care, *see* Health Insurance
- Industrial Relations, courses of instruction in, 150; Department of, 150; fellowships in, 69-70; prize in, 56
- Inspectors' Certificates, 92
- Institute of Local Government, 172
- Italian Language and Literature, courses of instruction in, 188
- Laboratories, 20-2
- Laboratory fee, *see* Fees
- Languages, Honours courses in, 88-90
- Latin Language and Literature, courses of instruction in, 119-20; Interim High School Assistant's Certificate, Type A, in Classics, and Latin and English, 89; Honours Course in, 118-9; scholarships in, 48-9; *see also* Ancient History, Classical Literature, Greek
- Library, 18-20; Curators of, 8; facilities for extramural students, 40
- Local Government, Institute of, 172
- Loss of year, 79
- Master of Arts, fees for, 46; requirements for, 95-6
- Mathematics, courses of instruction in, 153-5; Interim High School Assistant's Certificate, Type A, in, 90-2; Honours Course in, 151-3; scholarships in, 56-7
- Matriculation examinations, 31
- Mature students, admission of, 35-7
- Medals, 77; *see also* Scholarships
- Medical care, 27-8
- Military services, 29-30
- Miller Analogies Test, 96
- Museums, 20
- Music, courses of instruction in, 155-6; *see also* University Concert Series
- Music Room, 23
- Pass B.A., *see* General B.A.
- Philosophy, courses of instruction in, 158-60; fellowships in, 70; Honours Course in, 156-8; scholarships in, 53
- Physical and Health Education, Combined Course in Arts and, 92-4; fees for, 45-6; for first year students, 45-6; Interim High School Assistant's Certificate, Type A and B, in, 92
- Physical examination of students, 28
- Physical welfare of students, 27-8
- Physics, courses of instruction in, 164-6; fellowships in, 67, 68; Honours Course in, 162-3; scholarships in, 56-7
- Politics, courses of instruction in, 174-6; *see also* Political and Economic Science
- Political and Economic Science, courses

Index

- of instruction in, 172-8; Commerce and Administration, 176-8; Economics, 172-4; Politics, 174-6; Sociology, 176; Honours Course in, 169-72; scholarships in, 53-6
- Preparatory courses, 82
- Prizes, 52, 53, 55, 56, 58, 59, 62, 63-4, 75-7; *see also* Scholarships
- Pro tanto* allowance, *see* Fees
- Psychology, courses of instruction in, 179-82; Honours Course in, 178-9; scholarship in, 53
- Public Administration, Honours Course in, 171
- Public Speaking, Andrina McCulloch Scholarship for, 60
- R.C.A.F. Reserve University Squadron, 30
- Registration, 30; dates of, viii-ix, fee for late, 30
- Religion, courses of instruction in, 182-3
- Re-reading of examination papers, *see* Examinations
- Residences, 25-6
- Residence requirements for degree, 39
- Roman and Greek History, *see* Ancient History
- Russian Language and Literature, course of instruction in, 183
- Scholarships, Exchange, 52, 65; General, 60-5; Matriculation, 48; Undergraduate, 48-65; regulations governing, in Arts, 48; *see also* Fellowships
- Scholarships in Biology, 57-8; in Chemistry, 58-9; in Classics, 48-9; in Commerce, 55-6; in Drama, 60; in Economics, 53-5; in English, 49-51; in Extramural English 2, 49-50; in French, 51; in Geological Sciences, 59-60; in German, 51-2; in Greek, 49; in Hebrew, 52; in History, 53; in Latin, 48-9; in Mathematics, 56-7; in Philosophy, 53; in Physics, 56-7; in Politics, 53-5; in Psychology, 53; in Public Speaking, 60; in Spanish, 52-3; *see also* Fellowships
- Scholarships, Bursaries, Fellowships, Prizes, and Medals
- Abramsky, Harry, Scholarships in Commerce, 55; in Hebrew, 52
- Aikins, Sir James, Fellowship in History, 69
- Alumni Association *see* General Alumni Association
- Arts '01 Fellowship in English, 50; —'09 Scholarship in History, 53; —'15 Scholarship, 57; '50 Scholarship, 61
- Atkinson Foundation Scholarship, 64
- Baker, Manley B., Scholarships in Geology, 59-60
- William Coombs, Memorial Prize in Physics, 56
- B'nai B'rith, Kingston, Bursary, 61; Ottawa, Scholarship in French, 51
- Bogart, Flossie May, Scholarship in Greek, 49
- Bruce, E. L., Memorial Scholarship in Geology, 68
- Robert, Bursaries, 61; Scholarships, 60
- California Standard Company Fellowship, 68; Scholarships, 57
- Cameron, M. C., Prize in Gaelic, 75
- Canadian Federation of University Women Scholarships, 73-4
- Canadian Officers' Training Corps Scholarships, 61
- Cappon, James, Memorial Scholarship in English, 49
- Chemical Institute of Canada Scholarships, 59
- C.I.L. Fellowship in Chemistry or Chemical Engineering, 67
- Clarkson Prize in Accounting, 55
- Cohen, Isaac, Scholarship in Philosophy, 53
- Curtis Memorial Foundation, 76-7
- Daughters of the Empire Postgraduate Fellowships (Overseas), 74-5
- Davies, Senator, Poetry Prize, 75-6
- Day Scholarship in Physics and Mathematics, 57

(continued)

Dominion-Provincial Student-Aid Bursaries, Type B, 63
 Dunn, Sir James, Scholarship in Commerce, 55
 Dunning, Chancellor C. A., Scholarship in Political and Economic Science, 54
 Dupuis, N. F., Scholarship in Mathematics, 56
 Finlay, C. F. J., Memorial Prize in Commerce, 55
 Forrester, Edgar, Scholarship in Oral French, 77
 General Alumni Association, Toronto Branch, Scholarship, 60
 Gordon, Wilhelmina, Foundation in English, 51
 Gowan Foundation No. I, 54; No. II, 58; No. III, 55
 Haydon, Andrew, Scholarship in Colonial History, 53
 Hayunga Scholarship, 61; *see also* C.O.T.C. Scholarships
 Hersey, Milton, Fellowship in Chemistry, 67
 Hicks, Clarence J., Memorial Fellowship in Industrial Relations, 69-70
 Hillmer, Arthur, Memorial Prize* in Commerce, 55
 Industrial Relations Prize No. 1, 56
 Khaki University and Y.M.C.A. Memorial Fund, 61-2
 Laird, Alexander, Scholarship in English, 49
 Laurier, Sir Wilfrid, Memorial Scholarship in French, 51
 Leonard, Reuben Wells, Resident Fellowships, 66; Scholarships, 60, 64-5; Travelling Fellowships, 65
 Lieff, Solomon, Prize in Physical Chemistry, 58
 Lohead, W.M.O., Scholarship in Economics, 53-4
 Maritime Provinces Trade Relations Fellowship, 67-8
 Marty Memorial Scholarship, 70-1
 Matheson Prize, 77

Medals, 77
 Merkle, E. D., Prize in Mathematics 2, 56
 Mewkill, Mary, Memorial Scholarship in English, 50
 Milligan, George MacBeth, Fellowship in Philosophy, 70
 Moffat, William, Scholarship in Chemistry, 58
 Montgomery, O. M., Memorial Fund, 62-3
 MacClement, W.T., Memorial Scholarship in Biology 1, 57; Prizes, 77
 McCulloch, Andrina, Scholarships, Drama, 60; Presentation of Thesis Material, 60-1; Public Speaking, 60
 —Frederica, Scholarships in Latin, 48-9
 —Roberta, Scholarships in English, 50
 McIlquham Foundation in English, 50-1
 McIver Scholarships in English, 50
 MacLachlan, Alexander, Peace Prize, 75
 McLaughlin, R. Samuel, Resident Fellowships, 66; Travelling Fellowship, 65
 MacLennan Scholarship in Greek, 49
 —Mary Fraser, Prize in Hebrew, 52.
 McNeill Prize, 77
 Near, Susan, Scholarships in Chemistry, 58; in Geology, 60; in German, 52; in History, 53; in Mathematics, 56; in Physics, 57; in Psychology, 53; in Spanish, 52-3
 —W. W., Scholarships in Biology, 58; in Classics, 49; in French, 51; in German, 51-2; in Political and Economic Science, 54; in Spanish, 52
 Neish, A. C., Prizes in Chemistry or Chemical Engineering, 59
 —William, Fellowship in Chemistry, 67
 Nichols, Dr William H., Scholarship

ne of five cents will be charged for each
day overdue.

Index

(continued)

in Chemistry, 58
Ottawa Ladies' College Scholarships, 63
Patton, George and Mary Louise, Memorial Scholarship in Political and Economic Science, 54
Pipe Band Scholarship, 61
Prince of Wales Prize, 75
Rattray, Major James H., Scholarship, 69
Rhodes Scholarship, 71-3
Shell Oil Fellowship, 67
Shortt, Adam, Scholarship in Political Science, 54
Social Engineering Prize, 63-4
Society of Chemical Industry, Prize of, 59.
Stafford, Ann Eliza, Scholarship in Biology, 58.
St Andrew's Exchange Scholarship, 65.
Taylor, George and Lilian Coleman, Bursary, 64
——Lilian Coleman, Prize, 62
Tyrrell, J. B., Scholarship in Economic Geology, 68-9
University Scholarships, 60
University Women's Club of Kingston Bursary, 62
Wallace Prize, 77
Walsh, Thomas M., Memorial Prize in History, 53
Waterhouse, Edwin, Scholarship in Commerce, 55-6
Welch Scholarship, 64
Western Ontario Graduates Fellowship in History, 69
Whig-Standard Essay Prize, 76
Science, General Honours Course for teachers in, 90; Interim High School Assistant's Certificate, Type A, in, 88-90
Secondary School Graduation Diploma, 31; certificates equivalent to, 34-5
Senate, the, xvii, 7-8
Sociology, course of instruction in, 176; *see also* Political and Economic Science

Sororities, 28-9
Spanish Language and Literature, courses of instruction in, 185-8; Honours Course in, 184-5; scholarships in, 52-3; Interim High School Assistant's Certificate, Type A, in Spanish and French, and Spanish and English, 89-90
Stadium, George Richardson Memorial, 22
Standing, determination of, 78, 81
Student Interests, *see* Fees
Student self-government, 22
Students' Memorial Union, 25
Summer School, admission to, 36-8; courses offered at, 43; examinations, 44; fees for, 38-9, 47; prizes, 76-7; purpose of, 43-4; residence requirements, 39
Supplemental examinations, *see* Examinations

Teachers' Certificates, for graduates in Applied Science, 91-2; Commercial Specialist, 91; High School, 88; High School Assistant's, Interim, Type A and B, 88; High School, Permanent First Class, 31-2, 37, 88
Theology, Combined Course in Arts and, 94
Thesis, *see* Graduate work
Timetable of lectures and laboratories, xii-xiii
Transfer from extramural to intramural courses, 39-40.
Trustees, *see* Board of Trustees.
Tutors, 16-7

University Concert Series, 23
University Council, xvi, 6-7
University Naval Training Division, 29
University Scholarships, *see* Scholarships
Unmatriculated students, admission of, 34-5, 83

Vaccination, certificate of, 28
Veterans, admission of, 34, 83

Withdrawal of students, 78, 79
Women students, information for, 26

